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## THE SURGICAL TREATMENT OF TYPHOID FEVER AND ITS COMPLICATIONS AND SEQUELAE.*

BY HERMAN E. PEARSE, M. D., KANSAS CITY, MO.
Consulting Surgeon to the Woman's Hospital of Kansas City, Mo.

In assuming to write upon the subject assigned me at this meeting I am conscious that I must be brief as the program is long and, moreover, I have little of original thought to offer.

The surgical treatment of typhoid fever is practically limited to the following:

1.—Complications:
- A.—Appendicitis.
- B.—Perforating typhoid ulcer.
- C.—Peritoneal abscesses.
- D.—Pleural abscess.

2.—Sequellae:
- A.—Gall-stone.
- B.—Grangrene of extremity.
- C.—Bone necrosis, caries and joint decay.

### 1.—COMPLICATIONS.

A.—Appendicitis.—Appendicitis may occur at any stage of the disease, and probably does occur oftener than is generally recognized. The conditions are indeed favorable to such an occurrence; the current of the small intestine loaded with the products of ulcerative inflammation going on just above in small intestine discharges its infected current at the appendical outlet. The typhoid germ moreover is extremely prone to cause ulceration and tissue death.

When diagnosed, appendicitis in a typhoid patient must be especially considered in the light of the weakened condition of the patient worn by the long fever. They however bear the operation very well indeed, considering the conditions. In a series of 80 autopsies upon persons dead of typhoid fever, three cases of perforating ulcer of the appendix, were recorded by Osler. Medical journals contain quite frequent reports of the recognition and successful relief by operation of appendicitis, occurring during the course of typhoid fever. The course of the fever is generally a little prolonged, and the recovery is perfect if the patient survives the operation.

B.—Perforating Typhoid Ulcer.—The surgical treatment of perforating typhoid ulcer of the bowel is now on a firm and rational basis. The success of the operation depends upon the speed and dexterity of the operator, to avoid undue shock, and upon the promptness of the attending physician, in ordering the operation done. For example records of one hundred and twenty-three (123) cases of perforation operated upon with closure of the perforation, washing out the abdomen, and closure of the operation wound, were found by me to-day in a hasty search. Of these twenty-eight (28) recovered, a percentage of recoveries of 22.8. Of these the time of operation could not be determined in all, but in 15 cases operated upon within the first 12 hours, 4 recovered, 26.6 per cent; 20 cases operated upon between 12 and 24 hours, 6 recovered, 30 per cent; 13 cases operated upon in the second 24 hours, only 1 recovered, less than 8 per cent.

Cases however are operable as long as there is strength to survive the shock, that is until actually moribund and the per cent of chances for recovery is in proportion to the early diagnosis, and prompt operation.

C.—Peritoneal Abscesses.—These form about the liver, as subphrenic abscesses, about the kidneys, as perirenal abscesses, and occasionally against the parieties of the abdomen, where an especially severe inflammation of bowel has led to peritonitis and pus formation. All these cavities appear late in the progress of the disease, as a rule, and are cured by incision and drainage; where unrecognized they may burrow and lead to extensive destruction of the tissue, and damage to organs as in other cases of peritoneal abscess.

D.—Pleural Abscess.—One of the first places in which the typhoid germ was demonstrated as the cause of inflammatory disease, and where its pyogenic power was first proved, was in the pleura and pericardium. Keen notes nine cases, every one of which arose after the third week and five of them from one to two months after the fever, thus again showing the tendency of post-typhoid lesions to be sequellae oftener than complications. The treatment has been in all cases removal of the exudate by surgical means. In addition isolated cases have been noted of inflammation in almost every organ of the human body. Meningitis, arthritis, phlebitis, inflammation of the kidney, liver, spleen, middle ear, parotid gland, thyroid gland, and the chamber of the eye.

### 2.—SEQUELLAE.

A.—Gall Stones.—The entire time to be devoted by this association to this subject could be consumed by the study of the effect of the typhoid germ upon the gall-bladder and biliary passages. Typhoid germs stand second as to frequency in the germ found in pure culture in gall-stone disease. They attack the gall-bladder and passages and stones are formed with colonies of the germ as a nucleus of the stone. It is probable, moreover, that most of the relapses of typhoid fever occur as a result of the germs, resident in the liver, being flooded out into the intestine by the free secretion of bile consequent upon an early and too hearty meal.

The treatment of gall-stone disease, and in fact of the many other hepatic diseases due to previous typhoid infection, is the same surgical procedure employed in the same condition otherwise caused—clean, intelligent operation with thoro protection of the peritoneal cavity, and drainage of the purulent or infected area.

B.—Typhoid Gangrene.—This is as a rule due to thrombus, either venous or arterial, and depending for its general characterists upon the nature of the thrombus. Out of 214 cases recorded by Keen, it has occurred in the following sites:

Gangrene of ear, 6 cases; gangrene of nose, 10 cases; gangrene of face, neck and trunk, 47 cases; gangrene of arms, 5 cases; gangrene of genitals, 20 cases; gangrene of legs alone, 126 cases.

It has come to be the rule of the older surgeons to await the line of demarcation; and not to amputate until that forms. The aids of modern antiseptic surgery have to some extent modified this rule, but unless the condition call for and warrant, it is still a serious question, whether the expectant plan of treatment and the long delay of amputation is not less dangerous than early or earlier operation.

C.—Bone Necrosis and Caries and Joint Decay.—It has long been known that bone and joint disease after typhoid fever is extremely prevalent. It is now known that one of the favorite breeding grounds of the germ is in the marrow of the bones, and particularly in the red marrow of flat bones, and about the heads and extremities of long bones. Case after case appears in medical literature of caries or necrosis of bone; of periosteal inflammation and of joint softening, and decay following at long periods (in some cases as much as 14 years), after an attack of typhoid fever. In many of these cases, pure cultures of typhoid germs have been found, and in others mixt cultures resulted, showing that the germ of fever is often slumbering within a given bone until the advent of some "assisting" or qualifying germ calls it into life and poisonous activity; many cases of so-called tubercular bone disease, or tubercular joint disease, if properly investigated would show the typhoid and not the tubercular germ as a causative factor.

The treatment of such disorders requires all the skill of the surgeon along lines laid down for treating all other cases of bone caries and necrosis. As in previous topics the full discussion of this subject will occupy far more time than I can ask this association to grant it at this hour. An idea of the range of this trouble is gathered from the following tables from Keen:

Varieties of Bone Disease after Typhoid Fever:—Necrosis, 85 cases; caries, 13 cases; periostitis, 110 cases; osteitis (bone abscess), 12 cases; oteomyelitis, 10 cases; exostosis, 1 case.

Bones Involved 216 Cases:—Skull, 1 case; mastoid, 3 cases; frontal bone, 1 case; parietal, 2 cases; superior maxilla, 5 cases; inferior maxilla, 2 cases; sternum, 3 cases; ribs, 40 cases; vertebrae, 6 cases; clavicle, 5 cases; scapula, 2 cases; humerus, 11 cases; pelvis, 8 cases; ileum, 22 cases; tibia, 91 cases; fibula, 3 cases; foot, 8 cases; lower ex., 112 cases; radius, 2 cases, ulna, 15 cases; hands, 4 cases. Grand total of 216 cases.

It is gratifying to note that the prognosis is favorable and the results of accurate surgical treatment excellent. This emphasizes the need of separating these cases in diagnosis sharply from syphilis and tuberculous bone disease.

*Read before the Kansas City Academy of Medicine.

## "CONCUSSION OF THE BRAIN"—FROM THE STANDPOINT OF THE MODERN SURGEON.*

BY E. WYLLYS ANDREWS, A. M., M. D., CHICAGO, ILL.
Professor of Clinical Surgery in Northwestern University.

Recent autopsies and experiments on animals have cleared up much of the mystery of "concussion of the brain"—and much of the knowledge thus gained has not been publisht in this country; hence this brief review of the subject.

By the use of Golgi's method of silver staining, the microscope has been enabled to give us some proven facts instead of a wilderness of conjecture and hypothesis. Gross lesions, like hemorrhages, are easily detected by the eye; but not so the finer lesions of the cells or ganglia. Schmaus has thrown valuable light on brain concussion by his researches on "cord concussion," artificially produced, with a study of changes in the cells of the various columns. The application of similar methods to the study of brain concussion was carried out by striking the skull of the animal with hammers of different weights and by dead-house study of human subjects, Koch and Filehne, von Bergman, Bikeles and Buedinger being the chief workers in this field; and their results may be said to have firmly establisht "brain concussion" as a true pathological condition.

The sad lack of anatomic basis for such terms as concussion, which has until lately been a reproach to science, has now been removed. Von Bergmann shows that the oldest extant writers used the term with but the vaguest idea of its significance, and until very recent years we used it with little more real knowledge. Some false pathology was based upon the work of Littre, who in the eighteenth century made an autopsy on a patient dying from concussion. The only change found was a contracted condition of the brain, so that it had sunken away from the skull to some extent. This was extensively quoted as "a result of concussion," and only in recent years was it evident that this was a postmortem change, due to partial disappearance of the cerebro-spinal fluid. The laws of physics must never be lost sight of in considering phenomena within the skull! Here we have a closed cavity filled with fluid, and the laws of hydrostatics and hyraulics have full play. It is a familiar fact that fluids in closed cavities have the power to transmit waves with great intensity and even to focus and magnify them. As the brain is suspended in water its cells must be set in violent commotion when severe waves traverse it. Vibration of the skull started by a blow may possibly be reflected back and forth like the sound waves from the vibrating rim of a bell. This would cause a repetition of waves to strike the vital centers and produce a stunning effect; just as continuous light tapping may cause anesthesia of a nerve trunk. This has been put forward as a reasonable hypothesis, but there is little to support it. The initial blow probably causes the chief impression, and the vibrations are suppresst by the soft parts.

Filehne has clearly shown by his hammering experiments on the heads of animals that nearly all vital centers are affected in common. In surgical experience this is not uniformly the case, but with animals it was found that the harder and more persistent the pounding, the deeper the impression went, until fatal shock was produced. When it was not carried to this extreme, rapid recovery followed. This illustrated stunning of centers by pure concussion.

On the other hand, the theory of Duret has gained some adherents. This is, in brief, that the concussion phenomena are caused by reflex anemia of the centers involved, which, of course, brings it into closer analogy with the reflex phenomena known as surgical shock. Duret believes that the skull is elastic enough so that its walls bend ever so slightly under a blow, causing momentary increase of hydrostatic pressure upon the cerebro-spinal fluid in the lateral ventricles. This column of fluid having been presst from the lateral and third ventricles into the fourth ventricle, the latter is distended, which "stimulates the bulb and produces reflex anemia of the brain." This in turn would explain the common symptoms of shock, such as coma, which would be analogous to syncope.

Is there such a pathologic state as "anemia of the hemispheres," or is this only a working hypothesis as yet unproven? The experimental researches of Kussmall-Tennerschen have brought us some exact knowledge on this point. It is well to also mention the studies of Landois on the vagus as having to do in part with surgical affections of the brain. To investigate anemia experimentally, an ingenious method of causing it artificially was devised, viz., the injection of oil emulsion into the carotoid artery. This causes almost instantaneous ischemia of one hemisphere by the occurrence of multiple fatty embolism. The first effect of such an injection is a rise in arterial pressure, but this is very transient, and is followed by more permanent weakening of heart action and many of the symptoms of shock and concussion.

It would seem that enough autopsies had been held on persons dying from pure concussion to prove beyond doubt that this condition can be present even in fatal degree without visible lesion. The animal experiments above cited also go to prove that the old hypothesis of pure nervous shock is correct, and that it can exist without lesions which even the microscope can detect. We are still left to speculate as to the exact mechanism of this result, whether due to direct stunning of centers or to reflex influence analogous to surgical shock, according to Duret.

### TREATMENT.

The treatment of all head injuries must be much the same in the earliest stages, and the diagnosis of shock or concussion will often depend on the later history. If the heart's action be bad. stimulants and heat to the heart area, abdomen, feet and pelvis are indicated, just as in ordinary shock.

The head will have to be examined with minute care to exclude local injuries, and oftentimes should be shaved.

Ice bags are not indicated in extreme depression.

Sinapisms to the epigastrium, the use of camphor injections, musk and other stimulants, nitro-glycerine, ammonia, atropine, etc., exactly as in surgical shock, may be the first treatment needed.

In case of vasomotor paralysis, substances which increase blood pressure, such as adrenaline, atropine, etc., may be called for.

Direct treatment to the head has little result in restoring the brain function.

After reaction ice bags, compresses and brain sedatives may be employed, but in pure concussion recovery takes place without sequelae.

*Abstract of paper read before the American Academy of Railway Surgeons.

## THE INSTRUMENTAL RELIEF OF ACUTE RETENTION FROM PROSTATIC ENLARGEMENT.

BY WILLIAM T. BELFIELD, M. D., CHICAGO, ILL.
Associate Professor of Surgery in Rush Medical College.

The introduction of a catheter for the relief of acute retention from prostatic enlargement is, when intelligently done, entirely free from difficulty; but as frequently performed it becomes most formidable for both physician and patient. Hours of fruitless effort, lacerations of the urethra, serious hemorrhages, immediate suffering, and remote suppuration in the pelvic tissues, are common features of these cases. These unfortunate experiences, disastrous alike to the patient's welfare and the physician's reputation, are (as a rule) entirely unnecessary; they occur because the physician has an erroneous idea of the character of obstruction to the outflow, and therefore uses a metallic catheter.

It seems to be the general impression that the obstacle of urination in these cases is some rigid tissue, similar to an organic stricture; hence that some firm—i. e., metallic—instrument must be used to force a passage. A second dangerous deduction from the false premise is that this metallic instrument should be of small caliber. When called to such a case, therefore, the physician is prone to select a small metal catheter; this is passt into the penis and proceeds without obstacle until the beak enters the perineum. Here the instrument often meets an obstruction (perhaps the narrow opening into the triangular ligament); the physician, believing this to be the obstacle to urination, begins to force the instrument, gently at first, and more firmly afterward. After a few minutes of ineffectual pressure, the catheter is withdrawn somewhat for a fresh trial—and blood flows from the meatus, marking the first false passage. Thus the sanguinary contest with an imaginary enemy is begun.

The fact is that the obstacle to the exit of urine is not a stricture or other firm encroachment upon the urethral canal, but solely an edema of the prostate which offers but slight opposition to the entrance of a catheter, altho it prevents the opening of the vesical outlet from within, and thus causes retention. Hence a flexible gum or silk catheter easily overcomes the obstruction.

But the serious objection to the use of the metallic catheter is this: Its curve is adapted solely to the passage of the normal urethra, while the urethra traversing the enlarged prostate is abnormal—distorted by the irregular hypertrophied gland. To attempt to pass a rigid instrument with a given curvature thru a rigid prostatic urethra with an unknown but probably different

curvature is evidently irrational and obviously invites the disaster that so often ensues—laceration of the prostate and failure to find the vesical orifice.

The proper instrument for introduction thru a distorted, edematous prostatic urethra of unknown curvature is evidently one sufficiently flexible to follow the unnatural curves without laceration, and yet sufficiently rigid to transmit a certain slight force from the hand of the operator to the beak. A soft-rubber (Nelaton) catheter sometimes suffices, but often fails because too flexible and soft to separate the edematous walls of the prostatic urethra. The Mercier catheter — also called "prostatic" and "coude"—most intelligently devised by the noted French surgeon to meet this emergency, may be relied upon to relieve every case of acute retention from prostatic enlargement, unless the urethra has been lacerated by metallic sounds prior to its use. The stiffened, turned-up beak of this instrument hugs the roof of the urethra; as the prostatic tumors (as well as false passages) are usually found on the floor of this canal, it is evident that the Mercier instrument will evade both pitfalls as no other instrument can. Its shaft is sufficiently rigid to transmit the necessary force, yet so flexible that laceration of the urethra is impossible. (The physician should remember to mark the heel of the Mercier so as to identify the direction of the beak after the latter disappears from sight.)

The only cause for failure to introduce the Mercier catheter (aside from tight organic strictures, which are seldom met in these cases), is the presence of false passages; and even these may be often evaded by a Mercier of large caliber (15 English or more) when the small ones fail. But if the false passages be large and numerous, even the larger Mercier instruments may persistently traverse them instead of the natural channel. In this contingency—and in no other—a metal catheter should be tried; it should be of large caliber, long curvature, and its beak should be controlled and guided by the finger in the rectum. Under no circumstances should it be forced after its beak enters the prostatic urethra; for an obstacle requiring force to overcome it lies outside the urethral lumen, and should be avoided, not attackt.

If no instrument can be made to enter the bladder thru the natural channel, an artificial exit must be secured above the pubes. The simplest measure—aspiration—secures relief only for a few hours, and sometimes needs frequent and inconvenient repetition; hence if it become necessary to make a suprapubic puncture, this should be done with a small trocar and cannula. Thru the latter a small Nelaton catheter is passt deeply into the bladder; the cannula is then withdrawn, and the catheter fixt in position by adhesive straps and safety-pins. The continuous drainage of the bladder thus afforded can be maintained until voluntary urination or introduction of a catheter is accomplisht.

### SUMMARY.

1. Acute retention from prostatic enlargement is due to edema—not a rigid obstacle—in the prostate.
2. This edema can be passt by a Nelaton catheter, usually; always by a Mercier catheter.
3. A metallic catheter being curved to traverse a normal urethra is not adapted to the elongated, distorted, congested canal of prostatic enlargement—hence must never be used except as a last resort; and then with utmost care.

## LACERATION OF THE LIVER—WITH REPORT OF A CASE CURED BY OPERATION.*

BY J. L. WIGGINS, M. D., EAST ST. LOUIS, ILL.
Professor of Anatomy in the St. Louis College of Physicians and Surgeons.

The number of reported cases of lacerations of the liver has so increast of late years, as the field of abdominal surgery has gradually been enlarged, that the technic of operation there for is now fairly well understood. The chief interest now, therefore, centers on the diagnosis which, when divested of direct history of injury, does not differ materially from injury to any of the abdominal viscera, shock and hemorrhage. These are of slight importance in locating the lesion, as hemorrhage may follow laceration of any of the contained organs, and shock (which indicates merely the abolition of the controlling influences exercised by the nervous system over the vital organic functions of the body) may be produced with equal severity by mental as well as physical conditions.

In examining reported cases one is impresst with the number in which it is further noted, that vomiting of greenish bile ensued, this being frequently tinged with blood; yet no logical explanation is advanced as to the reason why blood should be in evidence in the vomit of those suffering from hepatic injuries, except the suggestion that possibly there was an injury to the stomach which had escaped observation.

In the case herewith reported, not only can we exclude the stomach from any injury, but also every organ in the abdomen, as all were closely examined previous to the location of the wound.

It occurs to me that we may well give some attention to this clinical symptom as an aid in locating, more definitely than heretofore, obscure lesions, especially in non-penetrating wounds.

Usually the anterior surface of the liver is involved in the injury; this on account of its exposed position, and the fact that in many instances a fracture of the ribs, the result of the violence, precedes injury to the liver. Whenever the sharp point of a fractured rib penetrates the liver substance, shock and hemorrhage follow immediately. Under these conditions blood escapes without restraint into the free abdominal cavity. If, however, there be no wound of this nature, the clinical symptoms are considerably maskt, and the patient need not present markt symptoms of shock, altho indications of abdominal injury may exist, from a period ranging from a few hours to several days. We may then have a sudden collapse, or the formation of abscess in the hepatic substance. This has been the clinical observation without any clear explanation. I would, therefore, like to call attention to a few anatomical points for a clear understanding as to how delayed shock, abscesses, bloody vomit or stool, may ensue.

The surface of the liver is covered by a strong fibrous capsule, which, under the name of Glisson's capsule, accompanies the portal vessels into the liver; all surface portions are further reinforced by a layer of peritoneum, except at ligamentous reflections the fissure of the gall-bladder and the portal fissure. The liver substance is soft, solid, friable and composed of lobules, each of which represents an independent atom of the whole, the essential element being the secreting cell; the grooved surface of contiguous cells forming the beginning of bile-duct radicles, which pour their secretion into a common drain, which empties into the second portion of the duodenum, with the duct of the pancreas—about four inches from the pylorus. The anterior liver surface being in contact with the thoracic cage, may by impact cause a separation of the friable tissue beneath, without causing a laceration of the serous or fibrous coats. Under these conditions we would have limited shock, referable to the sympathetic nerves, but blood and bile extravasation would be limited by the coverings and the further support of chondro-costal apposition. The fluid under these conditions would follow the law of projectiles, insinuating itself along the course of the least resistance. If adhesions following inflammatory action ensued, between the hepatic and diaphragmatic peritoneum, up to a certain point, the least resistance would be directed toward the center of the organ, the sides of the fissure being separated by the accumulation, to their utmost limit, then reverst along the point of adhesions on outer surface until rupture ensued, followed by pouring of contents into abdomen. Before this takes place, however, we would find, according to the depth of the fissure, a greater or less quantity of blood forced thru the hepatic ducts into the duodenum, with a resulting bloody vomit, and, if excessive, bloody stool.

### CASE.

The case presenting itself to my service was a Polander. Aet. 31; height 5 feet 8½ inches; weight, 170 pounds—very muscular. Was seen by the Assistant Company Physician March 27th, 1901, at 12:45 a. m. History: While manipulating large shears at the rolling mill he was struck by a piece of boiler iron, in the abdomen. There was but slight shock: the patient was not unconscious; he complained of severe pain in left hypochondrial region. The following morning this pain was accentuated, tympanites ensued and intestinal paresis developt. Tem. 101; pulse 106, and of fair volume. Solution of Epsom salt was given, followed by high enema, resulting in free bowel movement. Second day: A. M., temperature 101; pulse, 96. P. M., temperature 100.4; pulse, 88. At this time he was free from pain; bowels having moved four times during day. Third day: A. M., temperature 98.8; pulse 88. P. M., temperature 98.8; pulse 70. Fluid nourishment was given without any bad results. Bowels open. The symptoms at this time, as shown by temperature, pulse and general condition, indicated no serious lesion. There was no markt pain at any point upon pressure, and the dullness over hepatic area extended but little below the normal line.

The case was considered past the point where it required any special attention. This condition continued until 10 a. m. of the fourth day, when on rising the patient was seized with

*Read before the Illinois State Medical Society, May 20, 1902.

sharp pain in right side, followed by syncope, and all indications of shock; temperature subnormal; pulse rapid. The nature of the injury at this time was not suspected. Vomiting of bloody bile ensued, and also a large bloody stool. This condition suggested to my mind the bursting of a hematoma into the abdomen, which also connected directly with the intestinal canal; and the fact that the blood was freely mixt with the vomit suggested a point close to the pylorus.

The abdomen was opened by free incision along the median line, and found to contain from six to eight litres of dark venous blood.

An examination of the upper surface of right lobe of liver disclosed a stellate rupture two and one-half inches from its anterior margin, situated directly over the fissure of the gall-bladder, its diverging points being contained in the right lobe, while the spur was opposite the quadrate lobe. The wound was three inches long; the lacerated tissue being in close apposition. There was slight hemorrhage except at point of convergence, where there existed a loss of hepatic substance about one-fourth by one-fourth inches. The gall-bladder was greatly distended with about four ounces of dark, greenish-brown fluid, evidently of the same character as that within the free abdominal cavity. The wound was sutured with No. 2 catgut; abdomen cleansed and closed without drainage. At the time of, and following, the operation, patient appeared moribund.

Intravenous injection of one pint of normal salt solution was given and repeated every twelve hours. His pulse ranged from 80 to 130, and his temperature from 98.6 to 103. On the twelfth day after operation, symptoms of shock again ensued with considerable pain in the hepatic region. During this period he had much trouble with the bowels; they being loose, tympanitic, with waxy-colored stools and occasional passage of blood-clots. On the twenty-second day dullness was discovered over the liver, indicating reformation of the hematoma. I aspirated, withdrawing about three ounces of blood and bile.

On the following day I resected three inches of the seventh and eighth ribs, wiping out the cavity and introducing loose gauze drainage. His temperature, which was at this time 103, fell to 100.6. Two days later there was a free discharge of bile saturating dressings and bed; the amount secreted daily being from two to three pints.

His temperature ranged from 98 to 101, and the secretion of bile gradually decreast until fistulous wound closed July 17th. A very conservative estimate of the quantity of bile secreted in fifty-three days in which the wound was open would be fourteen gallons. The drain of biliary secretion caused great emaciation. All nourishment was rejected and nutrient enemas expelled. The bowels did not move except as the result of high stimulating enemas; stools were of light color and generally of fetid odor.

The patient was discharged August 10th, 132 days from time of first operation. He resumed his work, and, so far as I am able to learn, has since suffered no inconvenience as the result of the injury.

CONCLUSIONS:

1. That delayed, bloody vomit or stool, in obscure abdominal injuries, is indicative of rupture of hepatic substance without laceration of its fibrous or serous coverings.

2. That no method of suturing can be entirely satisfactory, (a), because if laceration is superficial it is not required; (b) if laceration is deep the dead space cannot be obliterated, as a consequence there is an accumulation of arterial and venous blood mixt with bile from this vascular organ, which may become infected, forming an abscess; or, if accumulation is excessive, break line of suture and tear protective adhesions.

3. That suture material, to be of any service, must oe large; to control hemorrhage it must exert pressure. In the first instance many lobules must be destroyed, and interference with venous and arterial branches and secreting radicles. In the second, a tightly drawn suture would cut thru friable structure or cause tissue necrosis.

4. All sealing materials, with the possible exception of the actual cautery, are not plausible in theory or warranted by results.

5. That the best results accrue from drainage by the most direct route and isolating damaged structure.

6. That immediate operation, irrespective of degree of shock, is the only rational method of treatment, and the only one based upon reported cases which has yielded good results.

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Dr. J. P. Lord, Professor of Surgery in Creighton Medical College, Omaha, reports (Journal American Medical Association, May 31, 1902) an extensive bone cavity healed by means of Thiersch grafts.

## REMOVAL OF FOREIGN BODIES FROM THE EAR.

BY FRANK C. TODD, A. M., M. D., MINNEAPOLIS, MINN.
Clinical Professor of Ophthalmology and Otology in the University of Minnesota.

There is no minor operation liable to give such disastrous results as removal of foreign bodies from the external auditory canal—if improperly performed. Most foreign bodies in the ear would do no special harm, aside from temporary discomfort, if left alone; but unskillful attempts at extraction may (1) injure the lining of the canal, (2) perforate the drum or (3) force the foreign body itself thru the membrane giving rise to all the dangers and sufferings of acute, infective media even if not mastoiditis and other sequelae of that grave condition.

On account of their comparative rareness (Roosa had but 562 foreign bodies to extract in 57,834 ear cases), physicians in general practice are not equipt with proper instruments for their removal; but one of greatest value is always in every doctor s possession: a syringe. If it is impossible to remove the foreign body by the intelligent, persistent use of the syringe, it is better for the average practitioner to cease in his attempts to extract the foreign body.

The importance of this statement will be more fully appreciated after study of this case-history:

Mrs. W——, farmer's wife, had a hornet fly into her external auditory canal. The result was agonizing, and the patient became frantic. No physician was accessible, and all the farm hands tried their luck at removing the insect, using "farm implements." By slow torture the insect was brutally murdered and finally ceast its movements. The discomfort to the patient was somewhat relieved, but severe earache followed, and in one day suppuration made its appearance. Three days later I found a tender canal, well stript of its lining, here and there remnants of the hornet were to be seen, notably the head, which had been shoved thru the drum into the middle ear! There was a general suppuration of the middle ear and external auditory canal. Syringing with warm water removed the mutilated remains, and vigorous antiseptic treatment cured the suppuration, and allowed the drum to heal in about two weeks.

But such prompt results do not always follow. Had warm water been used in the first place, the hornet would have been drowned, even if not expelled, and suppuration would have been avoided.

How shall we, then, remove foreign bodies that gain access to the canal? In the first place, a careful inspection should be made with the head-mirror thru an ear speculum, in order to see if there is really a foreign body present, and if so what and where it is. If the surgeon be no more expert in the examination of the ear with the head-mirror than was the writer while in general practice, he will see only a black,bottomless hole, and will know no more regarding the foreign body than he did before making the examination. Unless the foreign body is very accessible, and can easily be seen and hookt out, or is liable, like a pea or bean, to swell upon being moistened, the syringe should be used, the canal first being straightened by pulling the auricle upward and backward. A small stream of warm water should be directed against the upper wall of the canal, in order to pass above the foreign body and wash it out below; but failing in this manner, the stream may be directed against the lower wall. A fountain syringe is well adapted to this purpose, but a small point should be used, and considerable force may be necessary to dislodge the object. In case of an insect, if the water does not kill it quickly, alcohol or peroxide of hydrogen may be used to hasten its death.

Failing to remove the foreign body in this manner, instruments may be brought into service, provided the operator has the proper instruments, and has a good view of the field of operation; otherwise he had best not attempt it, for to go by feeling is very unreliable, since the click of the instrument against the bony wall of the canal may easily lead the operator astray, and this is a too delicate region to probe in the dark.

If the view is good, and the foreign body very small and not far in the ear, forceps may bring it out, but if the syringe does not accomplish the desired results, Allport's ear-hook will be found of the greatest service. This is simply a probe turned at right-angle at the end for ⅛ of an inch, with a small ball-shaped extremity, so that it will not scratch the tissues. This hook may be insinuated back of the foreign body, and the latter hookt out.

Children may have to be anesthetised for the operation.

If the canal is swollen and the foreign body large, it will be best to wait until the inflammation has subsided under treatment.

In rare instances it may become necessary to separate the

auricle from its attachment, and strip the integument of the canal, before the foreign body can be removed.

A very ingenious manner of removing some foreign bodies, which may occasionally be of service, is that of gluing a camel's hair brush to the foreign body, and removing the latter after the glue has hardened. In all instances it should be remembered that there is no haste, for the foreign body is not apt to do any harm if left alone even for some time.

## SEVERE INJURIES OF ABDOMINAL CONTENTS WITHOUT EXTERNAL EVIDENCES OF TRAUMATISM.*

BY R. HARVEY REED, M. D., ROCK SPRINGS, WYO.
Surgeon General of Wyoming; Emeritus Professor of Principles and Practice of Surgery and Clinical Surgery, Ohio Medical University.

It has been my privilege during the last twenty years to treat many cases of grave abdominal injuries presenting little or no external evidence of traumatism. In five out of six such cases death has occurred in from 24 hours to 26 days after the traumatism. I wish to report only three of these cases in detail, as the others were practically duplicates.

### RUPTURE OF INTESTINE.

CASE I.—The first of these cases came about fifteen years ago. The patient was an unusually large, healthy man of some 36 years of age, who had charge of a planing mill. At the time the accident occurred, he was engaged in sawing palings with a buzz-saw. These palings were about three feet in length, some two inches wide and one inch thick. In some manner one of them caught in the buzz-saw, and was thrown forcibly endwise, a distance of some six feet, striking him very forcibly over the left hypochrondriac region. Whilst the injury caused some pain, he continued his work for a short time, when he became sick and was taken to his home. Two of the local physicians were called in to see him, and being unable to find any external signs of injury, further than the mark made by the end of the paling, (which had simply reddened the skin for a distance of two inches in one direction and one inch in the other), they were of the opinion that he was simply suffering from shock, and that he would soon recover. On the contrary, he continued to grow worse; the abdomen became tympanitic and grave symptoms made their appearance. At request of the physicians, I made abdominal section at his home—there being no hospital at hand. On opening the abdominal cavity, I found the abdominal parietes perfectly intact. Not the slightest ecchymosis or the slightest tear of the muscles of the abdominal walls could be found. On entering the abdomen, I found a large tear of the ileum, located immediately under the point of contact made by the paling. This tear was of a triangular nature, and was sufficiently large to enable me to pass my finger into the intestine thru the hole without difficulty. The abdominal cavity was well soiled with fecal matter and blood. Acute general peritonitis had already set in, and altho the belly was thoroly irrigated and wiped out, the man died three days later—six days after injury. It is remarkable that such an extensive wound of intestine could have occurred with no external evidences of severe injury.

I have seen two other cases almost exactly similar in character. In one instance there was a rent in the stomach; in the other a large tear of the large intestine, each without external indication of severe injury; each fatal in a few hours.

### RUPTURE OF ILEUM.

CASE II.—Sept. 21, 1901, a Bohemian miner, 45 years old, was caught by falling rock in such a way as to produce a contusion of back and hips and thighs, but without fracture of the pelvis or any external sign of abdominal injury. He suffered severely from shock, complicated with epistaxis and vomiting. He died in twenty-four hours. Postmortem examination showed two perforations of the small intestines about six inches above the ileo-cecal valve, with fecal extravasation the cause of fatal peritonitis. There was not even bruising of skin or the parietal peritoneum—and no ecchymosis.

### EXTENSIVE INJURY TO PERITONEUM.

CASE III.—A man, American, aged 30, driver, was injured November 15, 1901, and admitted to hospital November 20.

While driving the cars, he was caught in some way between the "ribs" of the mine and car, sustaining a contusion on the left side and back, with a fracture of the pelvis on the left side, along the ilio-ischial junction. There was no evidence of displacement of the fragments, but in certain positions, crepitus could be readily elicited. The symptoms were so negative at first, that the very competent surgeon, Dr. Levers, was led to believe that the injuries were of a trivial character. For four days the patient's pulse, temperature and respiration were normal. From Epsom salt he had a copious bowel movement. In spite of the fracture of the pelvis he walkt a little on the third day after injury. On the fifth day he suddenly became very ill; his pulse increast to 120 and temperature dropt to 97° F.; the abdomen swelled; there was dullness on left side of abdomen; and delirium appeared. On his admission examination would have convinced me of a perforation of the gut with localized peritonitis, had it not have been for the copious bowel movement. The delirium continued four or five days, when it gradually disappeared. The temperature, which during this period ranged from 97 to 103½, became normal, and the dullness then began to diminish, leading me to believe a hematoma was being absorbed—probably located between the muscles of the abdominal wall. Dec. 3 he grew worse, and the area of dullness rapidly increast; temperature rose to 103½; delirium returned; and operation seemed imperative. The abdomen was opened in the left iliac region, no hematoma being found between the muscles; but the peritoneum had been torn loose from its attachments, giving rise to an extraperitoneal cavity containing about a gallon of blood, broken down blood-clot and serum. On cleaning this out, it was found that the left kidney had been torn loose and the descending colon pusht over to the midline. There was no sign of peritonitis. The cavity was washt out with peroxide of hydrogen and packt with gauze soakt in warm bichloride evaporating solution. The patient, altho weak and exhausted before the operation, rallied from it very nicely. The day following the operation he seemed to be semiconscious, apparently the result of exhaustion, as there was no evidence of inflammatory trouble, and little or no rise of temperature. There was no effort at repair, and whilst the wound remained perfectly clean, there was a peculiar ammoniacal odor connected with it, altho there was no evidence of escape of urine into the wound from either the kidney, ureter or bladder; this condition, to my mind, indicated molecular dissolution. There was incontinence of urine, and whilst the patient took considerable food, which apparently seemed to digest, yet he gradually sank and died on December 11, just five days after the operation and twenty-seven days after the accident.

### GENERAL COMMENTS.

We have had here a series of injuries in which there were grave abdominal injuries without corresponding external evidences of traumatism, yet the result in each case was fatal. In four of the cases mentioned, there was rupture of some part of the alimentary canal, followed by death.

What are the lessons we are to learn from these grave accidents? Could the lives of these patients have been saved thru operative interference? In the first case (in which the patient was struck by a paling), I firmly believe that if operative interference had been resorted to immediately after the accident, the patient might have survived the injury. In the case of rupture of the stomach, there was such general infection of the entire abdominal cavity (as shown by the post-mortem), such rapid collapse, that I question whether it would have been possible to have saved the life of this patient unless the surgeon had been actually on the ground at the time, and made immediate operation. It must be remembered, as in this case, that these accidents frequently occur miles from surgical aid, and by the time the surgeon reaches the patient the time for active interference has passt. This applies to the third case, in which the patient ran violently against the end of a rail, producing rupture of the intestine; but as the patient was past all hope of recovery when seen by the writer, and no post-mortem was permitted, it is only conjecture as to the real injury produced. At all events, operative interference would have failed in this case by the time it was possible for a surgeon to reach him. In the Bohemian miner, the question of immediate operative interference might well be considered. This man was in the hospital in less than three hours from the time the accident occurred. The question of operative intervention came up, but inasmuch as the patient never rallied from shock, I did not consider it good surgery to undertake an abdominal operation without any knowledge of where the injury might be located, with a pulseless patient, suffering from extreme shock, from which he never rallied. Had I seen the slightest sign of rallying, I would have operated on him at once. The last case is a peculiar one, and brings up the question of operation for hematoma. It is my custom not to operate for hematoma as long as there is reasonable hope of the blood being absorbed. I see many accidents every year in which there are markt hematomata located between the muscles, which are rapidly absorbed, and the patient

*Abstract of paper read before the Western Surgical and Gynecological Association.

gets well with little or no difficulty. Occasionally we have hematomata which do not absorb; these I consider proper cases for operative interference, and would treat such cases the same as I would a pocket of pus: evacuate and drain thoroly. We claim, in these days of antiseptic and aseptic surgery, that incision into muscular tissue with evacuation of collections of blood, ought not to be followed by infection, but notwithstatnding all the precautions the surgeon may resort to, these patients are liable to become infected. I, therefore, seldom open closed wounds when it can be avoided, and particularly so where nature is inclined to take care of the extravasation by the natural channels of absorption. This is particularly true when we have different nationalities to deal with who do not readily understand or thoroly comprehend the English language, and liable to unintentionally disregard the surgeon's instructions.

### CONCLUSION.

From reading the literature of this class of cases, together with my own experience, I am led to the conclusion that it is the surgeon's duty to make an exploratory incision in all cases where there is grave doubt as to the real nature of the injury, and particularly so when the constitutional symptoms point to a condition more serious than is indicated by either the subjective or objective symptoms, provided the physical condition of the patient is such as to warrant an operative procedure.

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## SOME USES OF ESMARCK'S BANDAGE OTHER THAN FOR THE CONTROL OF HEMORRHAGE.

BY T. J. MAXWELL, M D., KEOKUK, IOWA.
Professor of Surgery in the Keokuk Medical College of Physicians and Surgeons.

This is an age in which (and especially in surgery and medicine) there is a mad rush after something new. Our journals of surgery are filled with descriptions of new operations or new technics for old ones; new remedies multiply until the unpronounceable names fill the minds of the old doctor and the young practitioner with amazement and bewilderment. We are scarcely permitted to test a new technic or operation or a new antipyretic or analgesic or hypnotic until we are hurried on to something newer and better(?). Confusion and chaos are the result. The old doctor with his half-dozen remedies, which he knows just how to use, is better equipt than the young man with a buggy-case "chuck full" of tablets of various combinations, the uses of which he has but a confused and hazy knowledge; these combinations—ready to the young man's hand, markt "fever tablets," "headache tablets," and so on—are fatal to an independent, extemporaneous combination of medicines that he ought to find indicated and to be prescribed at the bed-side. I am afraid the generality of young physicians, going out armed with these ready remedies (no matter how good they may be), will ere long rank, as a therapeutist, with the housewife supplied with a case of sugar pellets, markt "No. 1, good for diarrhea," "No. 2, good for colic"! This is somewhat of a digression from my subject, "Some Uses of Esmarck's Bandages," but it will emphasize what I desire this paper to present—viz., the careful study of the various uses and applications of the individual articles of our armamentarum.

Von Esmarck made his name famous by presenting to the profession one use to which a rubber bandage could be put in the way of a surgical appliance. Its application to the control of bleeding from an extremity was so simple, the results so apparent and desirable, that it was received and hailed by the profession at large as a boon. What does the application of the rubber bandage do for the patient and surgeon? For the patient it husbands his vital fluid, the blood, thereby preventing depletion and modifying shock. For the surgeon it renders the field of operation free from blood, giving an unobscured view of parts dissected. There are some objections to its use, as the free hemorrhage from the refluent current that rushes into the parts on the removal of the bandage.

### FOR REDUCTION OF HERNIA.

In this paper I propose to extend the use of the rubber bandage, for various purposes, and even utilize that which is objectionable: the refluent current that produces hyperemia following removal of the constriction.

First.—I wish to present its application and usefulness in cases of large scrotal hernia.

Case I. Some years since, Dr. G. F. Jenkins called me to see a patient in his office; the man was suffering from a very large scrotal hernia. A right inguinal hernia had descended into the scrotum, producing a tumor as large as a cocoanut, which had become strangulated. The doctor had failed to reduce the hernia by taxis; so we administered chloroform; and even our combined efforts failed to reduce by taxis. The tumor was so large that the pressure with the hands seemed to make but little impression upon it. As the Esmarck rubber bandage, when applied, holds all the advantage it gets in the way of reduction, it suggested itself to me as applicable to a huge scrotal hernia like this. I therefore applied the bandage, making the application from below upward, drawing it tightly as I proceeded to apply turn after turn; finally, as the bandage came up to the body, its application was finisht by several turns around the pelvis, each turn coming back around the scrotum in spika form. The application was soon rewarded by complete reduction of the hernia!

Since that time I have never failed to reduce any scrotal hernia to which I could apply the bandage. The unrelenting grip of the tightly-applied bandage forces the fluids effused in the congested veins and capillaries back into the circulation, and the contents of the hernial sac, unable to resist the pressure, soon go gurgling back into the abdomen.

### A SUBSTITUTE FOR MASSAGE.

Second.—The rubber bandage is appropriately used whenever massage is indicated in surgical practice. Massage is very much neglected by the surgeon and general practitioner, and consequently is taken up by irregulars and constructed into a so-called "new system of treatment." Osteopathy, which has put forward claims of a "new discovery" and a "new system," is really but a revival and development of "massage"—the Greek word signifying "to knead"; but the practice dates further back than either Greece or the Greeks, possibly prior to written history. Manipulations were not only employed among the arts of the Hindoos for "charming away" disease, but from time immemorial have constituted a part of their system of legitimate medicine. References are made in the earliest records of the Chinese to special exercise or movements which were in use for the cure of certain affections of the body. The Romans, tho borrowing from the Greeks, far outshone them in the magnificence of their baths, which were accompanied by kneading, rubbing and unction with fragrant ointments. "Bone setting" (so-called) is similar. A patient with an old joint malady often goes to the "bone setter" [Osteopath of the present day—as he is popularly called]; no matter whether the joint be stiff or lax, enlarged or of normal size, the diagnosis is at once made that "the bone is out." The patient looks sceptical, but the bone-setter does not care whether the patient believes him or not; he is confident that he can cure him all the same! Allowed to proceed, a sudden movement or two, accompanied by a snap, convinces the patient that the bone-setter was right, who tells him that was the noise of the bone going back into its place. He is told to leave off supporters and use the limb; this is attempted and is successful; then it appears as if a miracle has been performed, and the patient lets every one he can know of it; but if not successful, or if the joint has been made worse, which is often the case, then, be sure, said patient keeps very quiet on the subject! A sudden movement of any joint, whether healthy or diseased, will usually cause it to snap, and if there be old adhesions, this is an excellent procedure. There are six divisions of massage, namely: Friction, rolling, kneading, compression, percussion and movement. The benefits to be derived from massage all result from impressions made on the blood-vessels, lymphatics and nerves of the part treated, and also in some instances, from the mechanical disruption or divulsion of inflammatory products.

Now, to come back to the subject: The rubber bandage is a very effective means in accomplishing what massage undertakes in the way of compression and friction. This it does by urging forward the lymph in the lymph-vessels and the blood in the veins, toward the two great representative trunks, the thoracic duct and vena cava; this is more effectually accomplisht by a rubber bandage, when tightly applied, beginning at the periphery and applying it slowly, giving time for the fluids to make their way towards the center; by this all-impelling force, that relentlessly grips the limb, the tissues are completely emptied of all their fluids, extending even to the deeper structures, the bone itself being somewhat affected by the pressure. This pressure, permitted to remain ten or fifteen minutes, fully accomplishes the work. When the bandage is removed, there is a sudden rush of arterial blood into the empty vessels. The limb thus releast from the bandage is suddenly changed from the pallor of marble to the pink of hyperemia, the lymph spaces and vessels are filled and attract and draw into their current effete or waste material lying outside their walls with increast power; thus favoring endosmosis and subsequent elimination. Obstruction of the blood-vessels being removed, improvement in

nutrition takes place by the rapid circulation of fresh, vivifying, arterial blood.

The vitality of the part is restored; consequently, old ulcers that have resisted all treatment begin to heal with proliferation of cells; healthy granulation-tissue takes the place of destructive molecular death; ulceration is replaced by construction; and the proper condition for repair being supplied, healing follows.

I will now refer briefly to special cases to which the bandage can be applied with markt curative effect.

In old chronically-inflamed legs, in which there is a very feeble circulation, the limb is cold and purple eczematous eruptions cover the skin, together with one or more sloughey ulcers which will not heal. There may be a condition of varicose veins, or they may have long ago disappeared from phlebitis, together with the capillaries, reducing the circulation to a minimum. The thickened, boggy tissue has scarcely vitality sufficient to maintain existence; if traumatism occur, no matter how slight, if it break the surface repair cannot take place. For such case the following is the mode of applying the remedy: 1st.—Foment the leg by hot water; by enveloping it in a blanket or some woolen stuff and keeping it hot with additions of water for two or three hours; remove the hot-pack and apply the rubber bandage, beginning at the toes and drawing it tightly in spiral turns until the leg is covered to above the knee. The bandage should remain on the limb for fifteen or twenty minutes. When removed the leg will be palid as marble and considerably reduced in size. The pallor is quickly replaced by a pink or red blush, the emptied capillaries and veins are refilled with fresh arterial blood, loaded with oxygen. Nutrition begins, absorption sets up, and all the vital forces are establisht. 2d.—The limb is enswathed in cotton-wool and a bandage applied to retain the dressing. This treatment, if repeated every day for one week or ten days, will produce changes that are as wonderful as gratifying. The discolored skin will have resumed its normal appearance in color, it will move freely over the tissues beneath, the swelling and indurated thickening will have disappeared, and the pain and tenderness will be gone; the unhealthy, sloughy ulcer has changed to a normal, velvety, pink, granulating surface. In fact, the circulation of blood and lymph has been so restored that the vital processes go on normally until health takes the place of disease.

### FOR INFLAMED JOINTS.

The above treatment is equally applicable to chronically inflamed joints, or those damaged in function by the products of inflammation. The sequels to fractures, of thickened tissues and obstructed circulation, without further particularizing the modus operandi of the treatment, will suggest the cases to which it is applicable.

In sprains of joints, recently swollen, the swelling may be reduced preparatory to the application of adhesive strapping.

In swollen limbs presumably from fracture or dislocation, diagnosis may be very much simplified by reduction of the swelling by the application of the rubber bandage.

## SURGERY OF THE THYROID GLAND.*

BY B. MERRILL RICKETTS, PH. B., M. D., CINCINNATI, OHIO.

It is unnecessary in this abstract to review the human and comparative anatomy (microscopical and topographical), as readers of American Surgery and Gyneology are doubtless familiar with it.

Many assigned causes are given, the most common being heredity, acute infectious diseases and malignant neoplasms. All vertebrates are subject to the same laws concerning disease and abnormalities of the thyroid gland.

Nephritis from any cause is the frequent underlying factor in the production of diseases of the thyroid, and when it is a cause the disease is usually a tumor of rapid development.

Thyroiditis is rare, and when present generally follows an operation, or injury.

Of the parasites, echinococcus and cystecercus are rare causes of tumor growth; while the bacilli of pneumonia, typhoid and tuberculosis and micro-organisms of a selective type are more frequent—leading to occasional abscess.

The results of disease of the thyroid gland are insanity, infection, hemorrhage, dyspnea and rupture.

Death may be due to any one or all of these causes.

The thyroid gland is subject to nearly all forms of benign and malignant neoplasms.

*Abstract of paper read before the Ohio State Medical Society, Toledo.

The treatment is classified as:

1. Medicative.
2. Operative.

### MEDICATIVE TREATMENT.

Internal medication and local application are of but little avail except to palliate. Extracts will benefit, but not cure: they will lessen the size of the certain forms of neoplasm, and are, therefore, only commendable in a certain class of cases as a palliative measure. Other remedies are practically useless. If one wishes to try thyroid feeding it should be remembered that fresh glands on ice do not produce toxic effects; and best results are to be obtained in chlorotic patients when raw sheep glands is used.

### OPERATIVE TREATMENT.

Dyspnea, stridor, rapid growth, dysphagia, deformity, symptoms of exophthalmic goiter, evidence of malignancy and rapid emaciation one or all indicate operation.

Removal of all or a part of the gland should be given preference to the injection of iodine, zinc, iodoform emulsion, alcohol, or any other solution. Excision is more radical, safer, and requires less time for recovery. Then, too, none of the neoplasm remains to be the seat of new growth either malignant or benign.

All forms of new growths of the thyroid gland should be removed. Even in cases of exophthalmic goiter removal of it should be adopted. All operative experience leads to this conclusion. Great relief has been given in many instances of exophthalmic goiter.

METHOD: If the disease is confined to one of two lobes without an isthmus, the diseased lobe may be completely removed often by enucleation without much likelihood of recurrence of the growth. If an isthmus be present the other half of the gland may subsequently become involved, especially in cancer; indeed, it is probable that malignant disease confined to one lobe is always due to the absence of the isthmus.

So far as possible, the presence or absence of the second lobe should be determined at time of operation. If the second lobe can not be found the entire diseased lobe should not be removed unless it be malignant.

The probabilities are that more frequently than we are taught to believe one or more supernumerary lobes are present in persons apparently possessing but one normal lobe, no matter where the abnormal ones may be located; but it is well to remember that supernumerary glands are more frequently upon the left side. The presence of supernumerary lobes may account for the absence of ill-effects in those persons who have been subjected to the removal of an entire right or left gland.

Division of the capsule will permit of a thyroid gland being enucleated with ease and without the loss of but little blood in cases which are not malignant, and which have not been effected by acute inflammation.

In skilled hands extirpation of goiter is not a dangerous operation—in Kocher's last series of 1000 thyroidectomies there was but one death: from ether pneumonia; but in the hands of an inexperienced operator, especially if not familiar with the anatomy of the parts concerned, it is a most formidable undertaking, death occurring from hemorrhage, shock or sepsis.

The rapid pulse following removal of a thyroid gland is probably due to the rapid absorption of the thyroidine in the process of repair. The pulse will sometimes become much more rapid for forty-eight to one hundred hours, reaching at times 160 per minute, but it will at the end of this time subside to 80 or 90.

If all of the glandular tissue be removed myxedema follows. This complication can be controlled completely by the internal administration of thyroid extract; but as this must be continued as long as life lasts it is always best, if possible, to leave some part of the gland in situ.

## DIRECT BONE-FIXATION IN FRACTURES.*

BY D. S. FAIRCHILD, M. D., CLINTON, IOWA.
Professor of Surgery in Drake University.

The fragments of certain fractures—especially compound—sometimes cannot be kept in apposition save by some direct means of fixation. This is particularly true of resection for nonunion. What method of fixation shall be employed?

The simplest and the one which leaves as little as possible in the wound which may act as a foreign body, should be considered first. In certain cases, where the wound is regarded as relatively safe from infection, the bone fragments may be bound together or sutured with strong catgut, which will hold

*Abstract of paper read before the C. M. & St. P. Surgical Association.

the fragments in place (with the aid of splints and dressings) long enough to secure the desirable results. In other cases, when the soft tissues have been badly crusht, and when a certain amount of sloughing may occur, and when less can be expected from splints on account of the risk from firm application of dressings, a more secure direct fixation must be employed. Silver wire is better, as it will last longer; the life of catgut will be too short. Unfortunately silver wire may not be entirely satisfactory on account of the movement it permits in the fragments. The Parkhill clamps are objectionable on account of the large screws, which are liable to injure the bones, and on account of the difficulty in applying them, and the interference in the application of dressings.

During the past year several cases of compound fracture have come under my care, which required direct fixation of the bones. These have given me an opportunity to employ different methods. In certain cases, as above stated, catgut has been sufficient, but five cases have occurred in which this was not deemed adequate, and the choice has been between silver wire and silver plates. Two cases were so near the joints that silver wire was used, as there was not room on the distal fragment to fix the plate without encroaching on the joint.

### FIXATION WITH SILVER PLATES.

In three cases the fractures were far enough from the joints to enable me to secure plane surfaces upon which to fasten them. The plates applied were one-half inch wide, one-twelfth inch thick and two or three inches in length, secured by two screws, one-half inch in length, on either side of the line of fracture. Holes were drilled in the bone with a small bone drill, and the screws placed by a screwdriver. These plates have been very satisfactory, and have held the bone ends in place, without the lateral motion permitted by wiring. These plates were removed at the end of three weeks, when sufficient callus had formed to permit us to depend on splints and dressings to hold the limb in position, until the callus had become firm. Some necrosed bone was removed later, when it had become loose. This was not attributed to the influence of the plates, but to the great direct crushing violence which lacerated the soft tissues extensively and seriously damaged the bone. These cases were, of course, treated by the open method, and before the soft parts had healed there was aboundant time to remove the plates.

### FIXATION WITH NAILS.

A few years ago a case came under my care in which a carwheel passt over the foot in such a way that the os calcis was fractured anterior to the attachment of the tendo Achillis. The pull of the gastrocnemius constantly displaced the posterior fragment. To secure the fragment permanently in place the lacerated wounds in the soft tissues on each side were enlarged, so that by means of the thumb and index finger I could force the fragments in place and secure them by two wire nails, driven directly forward from the point of the heel below the attachment of the tendon, after dividing the soft parts down to the bone. The result was very satisfactory, and the patient in due time resumed his employment as a brakeman, which he has continued to follow now for eight years since the accident.

I have never had occasion to employ any kind of direct bone fixation in simple or comminuted fractures, for, as a rule (which has no exceptions in my practice), it is possible to maintain apposition by splints and dressings, and there are serious objections to exposing the fractured bones if it can possibly be avoided. It is possible that cases of simple or comminuted fractures do sometimes occur where it is better to employ the open treatment, as, for instance, when it is apparent that soft tissues are interposed between the ends of the fragments, or in cases of multiple fractures where a short fragment is in a vicious position and cannot be restored without cutting down and employing more certain means of bringing the bone in proper position. If this procedure should become necessary it will rarely happen that direct fixation will be necessary, except in fractures of the patella.

### FIXATION WITH CATGUT.

In non-union of refractured bones, when other means of treatment have failed, a resection may become necessary to secure the physiologic usefulness of the limb. After the ends of the bones are properly prepared it will be necessary to adopt some means of direct fixation. In a large proportion of cases, especially of the smaller long bones, as of the forearm, where one bone only is involved, after the ends are prepared so as to expose the medullary canal in an oblique direction—which will afford a larger surface of contact—they can be held satisfactorily in place by drilling and suturing with large size catgut. The use of catgut will avoid the necessity of leaving a foreign body in the wound, which may give rise to trouble in the future. After the wound is closed the limb can be securely held in position by judiciously applied splints and dressings, particularly if the patient is under the direct care of a surgeon in a hospital.

A few years ago a fracture of the clavicle, which had united in a very bad position, came under my observation. It was necessary to cut thru the line of union with a chisel, but when the fragments had been brought together in a better position it appeared that the strain on the suture would be too great for catgut, and a silver wire was employed, with very satisfactory results. About two years later it became necessary to remove the wire. The movements of the shoulder had caused the ends of the wire to turn up against the soft tissues and produce a troublesome amount of irritation.

The decalcified bone ferrules suggested by Dr. Senn would appear to recommend themselves to the surgeon in certain cases.

In non-union of the larger long bones, as the tibia, femur, humerus or the bones of the forearm, when union has failed after one or more efforts by other means, a more rigid or durable fixative may be employed. The silver bone splint has, according to my experience, been the most efficient of direct bone fixation agents. In these cases the plates are allowed to remain, unless at some later period it becomes necessary to remove them on account of irritation.

## TWO CASES OF SARCOMA OF THE BREAST.*

BY EDWIN RICKETTS, M. D., CINCINNATI, OHIO.

Sarcoma of the breast, as compared with carcinoma and other growths, is of quite rare occurrence. Roger Williams analyzed 2,397 tumors of the mamma, and found only 94, or 3.9 per cent., to be sarcomata.

Clinically, sarcoma presents itself as a diffuse growth which is sometimes bilateral, or in the form of circumscribed nodules. The diffuse variety grows very rapidly, and often attains large proportions.

The diffuse, rapidly growing tumor histologically is generally a round-cell sarcoma. It is subject to mucoid degeneration and to hemorrhagic softening.

The nodular sarcomata are usually much firmer than the diffuse, and, while tending to recur after removal, do not often invade the adjoining tissues, nor do they produce metastasis, either of the lymph glands or of the general system.

Case I.—Mrs. McS., aged 64; married; mother of three children. Thirty years before (at the age of 34 years), patient first noticed a hard, round, small "lump" in her right breast. Eight years after this she called the attention of her family physician (Dr. G. R. Ricketts, deceast) to it exacting a promise that he tell no one. This was twenty-two years before its removal. Believing it to be not of carcinomatous nature, he advised noninterference. In January, 1897, patient had an attack of influenza, and was greatly prostrated from its effects, and from this time the tumor grew rapidly, being near the size of a child's head. On an examination May, 1897, there was found a tumor of the right breast, which was about as ugly and vicious-looking a growth as ever seen. The tumor was as large as a navel orange, from which a dark sanious fluid exuded. It was so large that the right arm was forced to project well out from the body. Temperature and pulse were normal. After drying out the cavity, it was packt full with a five per cent. carbolic gauze. The surrounding skin was washt with soap and water, after which pure alcohol was freely applied. No enlarged axillary glands could be felt, especially after the growth was removed. The tumor weighed twelve pounds. Altho a large woman, some difficulty was experienced in bringing together the edges of the flaps. Axilla was not disturbed. There were two points of suppuration, but with the exception of this, her recovery was entirely satisfactory. It is now nearly four and a half years since the operation was done, and there is no evidence of recurrence or of metastasis.

Dr. P. C. Loyne examined sections of the growth and found the tumor to be a large spindle-celled sarcoma.

Case II.—Mrs. B., aged 35 years, widow, mother of two children. She first noticed a tumor in her right breast at the age of fourteen, which gradually grew in size. During the past three years she noticed that its growth was more pronounced and the nipple more retracted. The axillary glands were normal in size, and not tender. The growth was the size of a child's head at birth, very tender, and movable. There was evidence of fluid in part of the growth, which was nodular. The tumor along with the entire breast was removed September, 1901. The axilla was not opened, as the tumor was regarded as certainly not carcinomatous. Recovery was satisfactory. The patient did not lose flesh any time before or after the removal of the tumor. It was a fibrosarcoma. There is no evidence of recurrence.

*Abstract from paper read at American Association of Obstetricians and Gynecologists.

## CARBUNCLE OF THE FACE.*

BY JAMES E. MOORE, M. D., MINNEAPOLIS, MINN.
Professor of Clinical Surgery in the University of Minnesota.

Carbuncle attacking the upper lip and face, in my experience, has occurred in patients quite young, tho this form of local infection with pyogenic cocci is usually described as a disease incident to advanced age. It is claimed by some that this acute inflammation of the upper lip and cheek should not be called carbuncle, as in this location it lacks many of the characteristics of carbuncle as found elsewhere; but the infection is the same—the reasons why the disease is of graver import here than elsewhere are purely anatomical, this location being rich in veins and lymphatics.

A carbuncle begins as a small red papule and spreads with varying rapidity—on the neck rather slowly, and on the face very rapidly—until it has a broad hard base and an oval top. It is usually circular in shape, but in soft tissues becomes rapidly diffuse and irregular; many minute pustules soon appear on the top, and the whole center may slough out. The induration of the tissues is greater than that of any ordinary inflammation. The constitutional symptoms vary greatly in different cases, sometimes being so slight as scarcely to interfere with the patient's business, and in other cases so severe as to make the patient bedridden. When the disease attacks the upper lip or cheek, the temperature soon becomes high and the general condition serious.

The prognosis when carbuncle accompanies diabetes or other general diseases is very grave. It is often grave when the disease occurs in feeble old people, because of their diminisht resisting power. The prognosis is always grave when this disease attacks the upper lip and cheek, because the tissues are soft, vascular and full of lymphatics, thus favoring a rapid dissemination of the poison. The special danger, however, seems to be the formation of venous thrombi in the facial veins, extending to the brain thru the free anastomosis between the veins of the face and the cerebral sinuses. The danger, therefore, is from both pyemia and septic meningitis.

The diagnosis of this malady offers no difficulty when it occurs in old people on the neck or back. When the infection occurs on the lip or face it is imperative that the diagnosis be made early, so that proper treatment may be applied before it is too late. The only disease with which carbuncle is likely to be confounded is malignant pustule. The anthrax begins as a pustule, and the skin becomes necrosed early, while the carbuncle begins as a papule.

The old "expectant plan" of treatment (poultice and wait) and the "conservative measures" (simple, multiple incisions), advocated for carbuncle in the aged, will not do in this serious condition. The most approved treatment of modern surgeons is total extirpation of all necrotic tissue by knife, scissors or Volkmann's sharp spoon, followed by packing with iodoform gauze. I now curet thoroly with a sharp, bone-curet, carefully dry the cavity thus formed and mop it energetically with 95 per cent carbolic acid, followed in about a minute by alcohol. The wound is then packt with iodoform gauze and covered with a sterile gauze dressing.

One who follows this plan, and does it before the patient is profoundly septic, will never regret it. There is every argument in favor of it and none against it, save that it makes a scar; and the scar is not so bad as the disease would cause if allowed to run its course. Even a bad scar is better than a funeral. The radical operation is safe, it relieves the pain immediately and the temperature disappears. The patient begins to improve at once and the whole aspect is changed.

Dr. Chas. A. Powers, of Denver, reports four cases involving the upper lip (Philadelphia Med. Journal, Feb. 9, 1901). One of these cases was unoperated and died. The other three were saved by timely radical operation. All of his patients were young men or boys. Dr. Powers says: "The foregoing cases are typical of a condition which is fraught with great danger and the importance of which is perhaps insufficiently appreciated by many practitioners of medicine." He suggests the possibility of performing this operation thru the mucous membrane to avoid the scar.

In my own work three cases of carbuncle of the face and lip have given two deaths and one recovery. Numerous other surgeons report results nearly the same—the high mortality being due to (a) late consent of patients for operation and (b) failure to early recognize the gravity of the disease and the necessity for prompt and thoro operative treatment.

With our present knowledge of this disease, I believe we are warranted in the conclusion that the so-called conservative or expectant treatment is only applicable to those cases in which the disease is so situated and if of so mild a character that the natural tendency is toward recovery. It certainly never is indicated when the disease is on the upper lip and face. When in this location, the disease is accompanied by a mortality of 50 per cent, and is not to be trifled with. The patient's safety depends upon an early diagnosis and very prompt and radical treatment. After thrombosis and embolism have occurred all treatment is hopeless.

When the disease is located upon the lip or cheek the surgeon assumes a greater responsibility when he operates on account of the scar, especially when the patient is a girl or young woman, but his responsibility is surely much greater when he fails to operate, for then the patient will probably die. It is our imperative duty to urge early operation, then if the patient or his parents refuse their consent the responsibility is theirs and not ours. The highest success attainable is secured by very early diagnosis and prompt treatment, for by this course we save our patient and the scar is insignificant.

*Synopsis of paper read before the Minnesota Academy of Medicine.

## THE ALARMING DECREASE IN BIRTHS IN THE UNITED STATES.

BY JOHN W. KYGER, M. D., KANSAS CITY, MO.
Professor of Pediatrics in the College of Physicians and Surgeons.

While different writers upon gynecological and sociological subjects have been discussing the diminisht birth-rate among the French and the manifest tendency toward the extinction of that race, not enough attention has been paid to the decadence of American-born women. It is, indeed, one of the most important topics which can be discusst by our profession—especially the gynecologists and obstetricians. Each decennial census shows an alarming decrease in the birth-rate—indeed, in some of the older states it has diminisht one-half; if it were not for the continuous, increasing stream of immigrants (with their fecund women) we should be astonisht at our National birth-rate.

What are the causes? And what can we do to correct the trouble?

Are our women becoming weaker and less able to bear children? I answer, No! The decrease in birth-rate is not due to the physical decadence of our American-born women, but chiefly to the fact that the average American wife does not want to bear children. They use every possible means to prevent conception (excepting abstinence from sexual intercourse); and those failing, resort to abortions.

Another—and very important—element is the fact that in this "progressive" age American women become active competitors with men in practically all departments of trade as well as of professional life—thus preventing many marriages which would otherwise occur; and if marriage be consummated, the presence of a child would so interfere with the woman's avocation that conception is not tolerated. Thus in Kansas City alone there are some 300 or 400 women employed as teachers—they cannot marry without sacrifice of their salaries, as the rule of the school board is to discharge every teacher as soon as married!

Wealth is also an important factor in the diminution of our birth-rate—pregnancy so interferes with social pleasures!

Another cause is that our girls do not obtain the right kind of education—it is not practical. The whole tendency of our present pernicious system is to render the girl proficient in various "accomplishments" by which she may be enabled to "shine" in society, while along domestic lines she is ignorant, and unfit to become a mother and care for a family; when married a new education must be obtained—when the wife is apt to become dissatisfied and unhappy.

Still another cause—affecting chiefly the better element of the "middle class" (financially speaking)—is that of expense. As antiseptic midwifery is now practist, there must be a doctor, a trained nurse and a servant in the kitchen; at very least $100 for each confinement—an item of no mean proportion in the household economy of those even who get good salaries; then, if there be any complication, a hospital bill and a surgeon's fee are in prospect!

Sterility due to gonococcal closure of the Fallopian tubes is also a cause of far greater frequency than generally believed.

As a result of these, as well as other causes, the birth-rate among American-born women is even less than among the French!

This decrease in the birth-rate is well illustrated by the census statistics of the United States. It was not until about 1830 that any considerable number of foreign immigrants began coming to our shores, and we find in the decennial census returns that the growth of population in the United States was:

| Years. | Per cent increase. |
|---|---|
| 1790 to 1800 | 35.10 |
| 1800 to 1810 | 36.88 |
| 1810 to 1820 | 33.07 |
| 1820 to 1830 | 33.55 |
| 1830 to 1840 | 32.67 |
| 1840 to 1850 | 35.87 |
| 1850 to 1860 | 35.58 |
| 1860 to 1870 | 22.63 |
| 1870 to 1880 | 30.08 |
| 1880 to 1890 | 24.86 |
| 1890 to 1900 | 20.87 |

During the first decennial periods in our history, when foreign immigration was limited, there was a steady growth of about 33.5 per cent. In the last ten years, from 1890 to 1900, only 20.27 per cent, a reduction of almost one-half, while during this period there arrived upon the shores of America 3,687,474 immigrants. If these be deducted from the total gain in population, our increase during the past ten years would only be about 14 per cent, as compared with a gain of about 35 per cent in the earlier periods. The only deduction which can be made from these facts is the one of decreasing fecundity in our wo men, and if we reason further and see the greater birth-rate among foreign women, it leaves a very small percentage for the American woman.

Some recent statistics publisht by the Boston Herald in reference to the Commonwealth of Massachusetts are exceedingly interesting. "The record of births show that there were in the year 1900 73,386 babies born in the State of Massachusetts. Of this number 37,772 were males, 35,614 females; and 23,000 were a native parentage, and 36,062 were of foreign parentage. To get the full significance of the disparity between native and foreign parentage, it is necessary to look at the census of 1900, which shows that the population of Massachusetts was 2,805,346, while the native born population was 1,959,022. and the foreign born population was 846,324, so that, as the Herald easily figures out while the native born population outnumbers the foreign born more than two to one, when it comes to the number of births, the foreign born population is responsible for over 50 per cent more than the native born. But that is not all that is notable in the social statistics of the Bay State. The Herald states that in the same year, 1900, there were 24,342 weddings, 10,659 where both contracting parties were native born, and 8,087 where both contracting parties were foreign born. The Herald makes a rough estimate showing that for every wedding where both contracting parties were natives, there were 2.1 children born of native parentage, while for every wedding where both contracting parties were foreigners there were 4.4 children of foreign parentage born."

In a paper written by Dr. Geo. J. Englemann, of Boston, Mass., there is collected quite a mass of statistics which illustrates the decreasing fecundity in the American race. While it has been impossible to gather reliable statistics from the whole country, yet enough have been obtained upon which reliance can be placed. In this paper a number of tables have been submitted, which are of great interest to every thinking American who has the welfare of this country at heart. In one of Englemann's tables he institutes a comparison of the birth-rate in this country with various foreign governments. In one of these he gives the number of births registered per thousand of living population excluding still births:

European.—Russia, 48.5; Austria, 37.2; Prussia, 36.9; Italy, 36.3; England, 30.3; France, 22.4; Massachusetts, New Hampshire, Michigan, Rhode Island and New Jersey, 1894, 22.1; Massachusetts native born, '93 to '97, 17.00; foreign, 52.2; Michigan, native, 14.1; foreign, 50.00; Michigan native born of foreign parents, 1894, 12.0; foreign, 37.2.

These statistics show the French are ahead of the native American in fecundity; 17 per cent in Massachusetts and 14.1 in Michigan, while it is 22.4 in France.

In another chart given by Englemann, the number of children to each marriage and comparisons with other countries is exceedingly interesting. According to this we have: Russia, 5.5; Austria, 4.1; Prussia, 4.2; Italy, 4.4; England, 3.9; France, 2.1; Missouri, '85 to '95, native, 2.1; foreign 3.8; Michigan, '90 to '94, native, 2.1; foreign, 4.1; Massachusetts, 1885 native, 2.7; foreign, 4.5.

Englemann further says: "In the State of Massachusetts, according to Kucynski, the surviving children, or the number of children living at the time of the taking of census, was 1.9 for the American and 3. for the foreign wife, with an average of both thruout the state of 2.3, the relative proportion of native and foreign born children being somewhat reduced by the greater mortality of the latter. The number of surviving children to each American mother thruout the State of Massachusetts is given as 1.9; amongst the highest and wealthiest class of the city of Boston, 1.8; among college women, according to observations of Prof. Mary Roberts Smith, it is 1.6; while among non-college women of a corresponding social class she finds it to be 1.8. The total birth-rate among college women is lower than that of any other group, according to the investigation of Carroll D. Wright in 1885. Among a number twice as large as that from which the data of Prof. Smith are taken, a fecundity of only 1.3 children to each married graduate was found.

I believe every medical man appreciates the value of these figures from his own experience.

Considering them seriously, the question must be askt: Will our high civilization, which has brought woman to the proud position she has attained, be the ultimate means of extinguishing the race? In answering the question I would say I think not. but the race must be made to understand the dangers ahead. It is folly to try to increase the birth-rate by legislation—it must come thru educational methods; and greatly thru the influence of our profession. No one but a doctor can thoroly describe the horrors of peritonitis following abortion; none but he picture the chronic invalidism dependent upon long-continued violation of Nature's laws. Women must be made to realize the dangers (if not the wickedness) of abortion and to understand the necessity of child-bearing to become perfect in body and in mind.

Clergymen should teach the sin of abortion and of Onanism; to the credit of the Catholic church it must be said that priests do this, and do it well—for almost universally we find large Catholic families and few clandestine prostitutes, while among Protestants we have small or no families.

Another reform should be instituted thru the public press. I believe if the proprietors of our daily papers could realize the harm done by admitting advertisements of a questionable character, much good could be accomplisht. Upon looking over the Sunday edition of a late daily paper, I found a half column of "personal ads," containing advertisements for treating "irregularities," "Homes for ladies before and after confinement," "Homes for infants," "Private trouble cured," "Delayed or suppprest periods relieved," "Ladies in trouble will not regret calling on Dr. S.," "Ladies try my regulator; sure relief," "Ladies in trouble use our sure remedy." "Five hundred dollars reward for a case of obstinate menstrual suppression, any cause, my monthly regulator fails to relieve," "Ladies: our regulator never fails, trial box ten cents," and so on ad nauseam. That our public press should countenance and print such advertisements is a disgrace to our civilization. I believe if the editors and publishers of most of these papers were approacht in the right way, they would decline to print such announcements. Let us do what we can to eradicate this evil.

## LITERARY NOTES.

A practical Manual of Insanity—For the Student and General Practitioner, by Daniel R. Brower, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and Henry M. Bannister, A M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages, with a large number of full-page inserts. Phiadelphia and London: W. B. Saunders & Company, 1902. Cloth, $3.00, net. No graduate in medicine is thoroly equipt to practise his profession unless he be acquainted with at least the rudiments of the science of psychiatry. Broad tho its domain and difficult of mastery, yet every one may readily acquire knowledge of those principles upon which depend a successful treatment of those cases of mental disorder that form a part of every physician's practice, by study of this work, which is intended for the student and general practitioner. It is an intelligible, up-to-date exposition of the leading facts of psychiatry, and will be found of invaluable service, especially to the busy practitioner unable to yield the time for a more exhaustive study. The work has been rendered more practical by omitting elaborate case records and pathologic de-

tails, as well as discussions of speculative and controversial questions. Certain special features of the work, also broadening its field of usefulness, are the mention of the forms of insanity not usually met with in hospitals, and the including of a comparative table of classification and a chapter on some of the ethical questions relating to insanity as they may arise in the practice of medicine. Indeed, there is no work of its scope which covers the field so completely, yet concisely and clearly.

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Dr. Chas. R. Dickson, of Toronto, has written a brief little book entitled "First Aid in Accidents." It is designed as a manual of instruction for railway and factory employes; and will be found satisfactory for the purpose. It contains 128 pages; bound in cloth. Publisht by the Fleming H. Revell Company, Chicago and Toronto.

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The Cleveland Medical and Surgical Reporter for May is an unusually attractive journal—something near 100 pages being devoted to the coming meeting of the American Institute of Homeopathy (Cleveland, June 17-21). For neatness of design and excellence of contents it is a model.

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The International Journal of Surgery announces a book shortly to be issued by Dr. George G. Van-Schaick, on Regional Minor Surgery, devoted to the surgical conditions met with in the daily practice of the physician.

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An interesting number of the Practical Medicine Series of Year Books is Vol. III., on Eye, Ear, Nose and Throat; edited by Casey A. Wood, M.D., C.M., Professor of Ophthalmology in Medical Department of the University of Illinois; Albert H. Andrews, M.D., Professor of Otology in the Chicago Post-Graduate Medical School; and T. Melville Hardie, A. M., M.D., Professor of Clinical Laryngology, University of Illinois. Price, $1.50 (set of 10, $7.50). Publisht by The Year-Book Pub. Co., 40 Dearborn St., Chicago.

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Morphinism and Narcomania from Opium, Cocain, Ether. Chloral, Chloroform and other Narcotic Drugs; also the Etiology, Treatment and Medicolegal Relations. By T. D. Crothers, M. D., Superintendent of Walnut Lodge Hospital, Conn.; Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Handsome 12mo of 351 pages. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $2.00 net. If there is any man in the world who can write authoritatively upon these subjects, it is "Crothers of Walnut Lodge." With his vast knowledge, extensive experience and unusual talents, he is able to speak in such way as to command attention from all. This alone should make this book of value; but beyond this the alarming increase, in the last few years, of morphomania and the associated various narcomanias imperatively demands attention by the medical profession. Every year the increasing prominence of this psychosis calls for more exact studies, with a fuller recognition of the conditions and causes of the disease. Medicolegally, questions of responsibility have been askt with increasing frequency, and there has been no literature and no study of the subject to afford an intelligent answer until this present volume was printed. The special object of this work has been to group the general facts and outline some of the causes and symptoms common to most cases, and to suggest general methods of treatment and prevention. The object could not have been better accomplisht. The work gives a general preliminary survey of this new field of psycopathy, and points out the possibilities from a larger and more accurate knowledge, and so indicates degrees of curability at present unknown. The author shows his absolute familiarity with his subject in the clear, concise and in every way admirable work which he has given to the profession, whom he has placed under merited obligations.

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E. B. Treat & Co., of New York, have recently issued a neat little book (84 12mo pages, blue cloth), entitled "A Manual of Child-bed Nursing," including notes on infant feeding. It is written by Chas. Jewett, A.M. M. D., Professor of Obstetrics and Gynecology in Long Island Hospital College, Brooklyn. 5th edition. It is of value not only for nurses, but also for prospective mothers.

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The "General Surgery" number of "Practical Medicine Series" (price $2.00, by The Year-Book Publishers, Chicago) is edited by John B. Murphy, A.M., M.D., Professor of Surgery in Northwestern University Medical School. It reviews practically the entire field of surgery, with special reference to recent advances. It should be carefully read by every surgeon who desires to keep strictly "up with the times."

Among reprints recently received may be mentioned: Simple and Ethereal Sulphates; by Geo. W. McCaskey, A.M., M.D., Professor of Clinical Medicine in the Ft. Wayne College of Medicine.—Effect of Direct, Alternating and X-Ray Currents on Bacteria; by F. Robert Zeit, M.D., Chicago, Ill., Professor of Bacteriology in Northwestern University and in the Post-Graduate Medical School.—The Pathology and Bacteriology of Uretero-intestinal Anastomosis; by the same author.—Migrated Ovarian and Parovarian Tumors. Geo. M. Edebohls, A.M., M.D., Professor of Gynecology in the New York Post-Graduate Medical School.—On Bandages for Nephroptosis; by the same author.—Is the Kraske Operation Justifiable in Women? by the same author.—The Cure of Chronic Bright's Disease by Operation; by the same author.—Monograph Read Before the West Chicago Medical Society on a New Method of Delivery by the Obstetrical Tractor; by E. D. St. Cyr, M.D.—Complicated Ovarian Tumors: by Emil Ries, M.D., Chicago, Ill.—A New Operation for Retrodisplacement of the Uterus; by the same author.—Proceedings of the American Medico-Psychological Association.—Two Rare Tumors: Calcareous Uterine Fibroma and Fibro-nyoma of the Urethra; by H. G. Wetherill, M.D., Professor of Gynecology in the University of Denver.

## GYNECOLOGICAL NOTES.

Two cases of Cesarian section are reported to Medical Sentinel of Portland, by Dr. W. Gilbert Cole, of Pendleton, Ore. He concludes that the essentials to success are (1) thoro asepsis of patient, operators and assistants; (2) expedition in work, as shock must necessarily figure as a factor in every case; (3) diligent efforts in controlling blood loss; (4) a thoro cleansing of the abdominal cavity by gently drying with gauze, avoiding all rough handling of the peritoneal cavity and contents; (5) careful suturing of uterine incision. This last, if not carefully done, may undo all the previous good work. He thinks that while such operations may occur only once during a lifetime or not at all, it is well that every physician should be able to meet the conditions should they arise. The general practitioner in the practice of obstetrics should be more than a generally useful person, otherwise he will soon sink to the level of the ordinary midwife! Not only should he be able to estimate the amount of pelvic contraction, but his experience with normal cases should qualify him to form an opinion as to whether it would be possible for a living child to be born; and recognizing that it cannot, be prompt to adopt suitable measures.

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Dr. Emil Ries, of Chicago, thinks there has been a singular neglect of the study of involvement of the lymphatics in cancer of the uterus. The lymph channels have been carefully investigated in cancer of the tongue and breast, and where possible it has been recommended that they be extirpated at the time of the primary operation. Prior to 1895 it was taught that the lymphatic glands were rarely involved in cancer of the uterus, and it was believed that regionary involvement of the lymph glands only occurred in the final stages. The researches of Ries have shown that glands of the pelvis, as elsewhere, are often cancerous when they are not larger than normal. Sometimes they are enlarged when associated with ulcerative processes in a neighboring growth, and such glands may contain only hyperplastic glandular tissue, without any cancer cells; or the latter may be associated with cancerous tissue in varying admixture. It is important to remember that the size of the cancer in the cervix bears no relation to the size of the affected glands. In one case the cancer of the vaginal portion of the cervix was not larger than a thumb-nail, but a gland was enlarged to the size of a pigeon's egg. His conclusions are that glandular involvement in cancer of the cervix does not materially differ from that of cancer in other regions of the body. Therefore an operation for cancer of the uterus in which the infiltrated glands are removed gives the patient an increast chance of complete cure. Extensive glandular involvement contraindicates all but palliative treatment. The necessity of early diagnosis of cancer is still paramount, if operation is to be successful.

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Prolapse of the uterus in women who have not borne children is comparatively rare. Dr. Henry D. Beyra reports a case in American Medicine, May 17, 1902; and has collected a number of other cases from the literature. The only conclusion to be gained is that commonly its subjective etiology is chiefly dependent (1) on poor health, physical weakness and general tissue relaxation; (2) frequently on want of development of the uterus and its supports. The exciting causes are the diseases, laborious occupations and great physical effort which actively increase the

abdominal pressure. The treatment naturally consists of attention to the general health and the performance of such plastic and abdominal operations as will restore the equilibrium.

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To the gynecologist there is no more interesting and important topic than hysteria. An instructive article on the subject by Dr. S. I. Schwab, Professor of Nervous Diseases in the Sims-Beaumont Medical College, St. Louis, appears in St. Louis Medical Review of May 17, 1902. He calls especial attention to the value of employment in the treatment of hysteria and neurasthenia, and quotes from Monnier, also giving conclusions. By means of manual work, hysteria and neurasthenia can often be made to completely disappear. In cases of mental enfeeblement, psychopaths and alcoholics, the influence of work is often very remarkable. Hypochondriacs and paranoiacs are not specially benefited. A valuable point is the impulse which it gives to the acquirement of some definite work which may afterwards be made self-supporting.

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A queer case of "vicarious menstruation"—if such it be—is reported in Journal of the American Medical Association, May 31, 1902, by Dr. J. G. Huizinga, of Grand Rapids, Mich., formerly Professor of Ophthalmology in the Chicago Post-Graduate Medical School. The patient was aged 17; occupation, house work. Both parents are living and are healthy, hard-working people. There is no history of specific trouble or any other hereditary disease. She has never been sick; is strong, robust and well developt. Her menses appeared when she was 14. They were somewhat irregular at first, but had been fairly regular for the last year and a half. They were usually accompanied by headache, some backache and a feeling of indisposition. These symptoms were never sufficiently severe to confine her to bed. During the first day of her October menstrual period, while stooping forward to fasten her shoe, she suddenly felt dizzy and nearly fainted away. Everything she lookt at seemed distorted, and her vision became dimmer and dimmer. Apparently the left eye was first affected, followed in a few minutes by a similar condition in the right eye. That afternoon she consulted him and he found the appearance of the fundus to be that of hemorrhagic retinitis with numerous blood spots scattered over the field. The optic disc was slightly inflamed and its borders rather indistinct. There were a few clots in the vitreous. The external appearance of the eye was that of an ordinary conjunctivitis. Vision in the right eye was 5/200 and in the left eye 10/200. A tight cold compress was immediately applied and instructions given for a warm sitz bath three times a day. The artificial leech was applied to the temples and about two ounces of blood removed from each side. Potassium bromide and potassium permanganate were given internally and free catharsis establisht. The menstrual period passt without further trouble. The conjunctival congestion disappeared, the vitreous cleared, and the larger hemorrhagic spots in the retina changed into atrophic ones; the others disappeared without leaving a trace. But before this transformation had been completed the time for the next menstrual period had arrived, and with it a repetition of the same phenomenon. The same treatment was instituted as before, only to be followed by another and a last hemorrhage with her December period.

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A rare case: coexisting uterine and extrauterine fetation, is reported in American Journal of Obstetrics, by Dr. E. Gustav Zinke, of Cincinnati; and remarkable to relate, the abdominal section was performed, the uterine pregnancy was uninterrupted and labor occurred at term. In his report he discusses the various questions suggested by such cases, first holding that the occurrence of the two conceptions in this case were simultaneous; then taking up the cause and time of death of the ovum, the difficulty of diagnosis and the frequency, cause and duration of these conditions and their treatment. He thinks it one of the rarest complications of pregnancy and no pathologic conditions should be held responsible for it. The duration varies. Generally both pregnancies are interrupted, but cases are reported where both ova grew and developt at the end of term, and both children were born alive, one by operation and the other in the natural way. The prognosis is grave for both mother and the child. The treatment is plainly indicated by the course and duration of each case. If rupture occurs, prompt operation is necessary. He analyzes 88 cases found in the literature and gives a tabulated statement of the same.

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The importance of gonorrhea in the female is again pointed out by Dr. Byron Robinson, Professor of Gynecology in Harvey Medical College, Chicago, in Kansas City Medical Index-Lancet for May. He says the treatment of gonorrhea in the female is unsatisfactory because when the gonococci gain the genital mucosa they at once appropriate it as home. They wound the mucosa and serosa, making atria for infection. The resulting inflammation desquamates the epithelia and endothelia. These atria are entered by all existing pathogenic microbes producing inflammation, which proliferate connective tissue, whose fate is cicatrices and contraction (stricture). Cicatricial contraction (the destructive results of gonorrhea) distorts the mechanism of the tractus genitalis and adjacent structures, compromising structure, function, circulation (blood and lymph), traumatizing nerve periphery, lessening nourishment and resistance. The gonococcus, under quiet life on the mucosa, gradually becomes less virulent (as shown by cultures), until it loses its virulence or the individual resistance conquers it, and then all which remains is results: cicatrices. However, at the great functions of the genitals; menstruation, abortion, labor, secretion (and excessive coitus and alcohol), the gonococcus partially revives its virulence from new food (due to hyperemia and consequent excessive secretion). Thus the gonococcus in the female tractus genitalis (and peritoneum) is liable to live continuously during the sexual or menstrual life from recurrent food supply producing new gonococcus cultures.

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Philadelphia Medical Journal remarks, editorially, that from the days of antiquity it has been recognized that a distinct tho occult relationship exists between the genital sense and certain of the mental processes. Not only has this relationship been observed, but it has been noted that it is more markt in certain neurotic individuals, and that in these individuals, as well as in others, it is more pronounced at certain periods of the annual cycle or of the individual's existence. A most cursory examination, moreover, of the phychology and religions of the ancient and modern peoples will reveal the same curious mingling of the sensual with the esthetic and psychical side of nature. The Hebraic doctrine and the mythologies of the Persians, Greeks and Romans are strongly based on the sensual side of life, while in some of the modern religions the same curious taint, if we may so call it, may be clearly traced. It is a well-recognized fact that women are essentially more religious than their consorts, and it is to be expected, therefore, by analogy, that in women we should find this intermingling of the sexual life with the higher processes of the mental and moral being more markt than in man. The well-recognized development or climacteric forms of insanity, originating either at puberty, during the puerperium, or after the menopause, and partaking of the nature of melancholy, mania, or dementia, sustain the view of the close association of these physical and mental functions, and the exaggeration of the hysterical manifestations of the individual at these critical periods of the sexual life also tend in the same direction. It is from this well-defined association that has arisen the belief, which is both erroneous and harmful, that all insane women should be castrated in order to remove the baneful influence of the powerful ovarian function. The wave of opinion as regards the surgical treatment of feminine insanity has violently fluctuated from one extreme to another, but it has now practically settled upon the happy medium that pelvic surgical procedures in the insane should have the same limitations as in the sane; that is, that they should be restricted to those insane suffering from gross lesions of the pelvic viscera. It has been experimentally proven that castration, pure and simple, with removal of organs to all appearance sound and healthy and functionating, has no beneficial influence whatever upon the course of the insanities or other mental or moral stigmata.

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For ovarian pain, an excellent combination is:

R. Potass, bromid.
Chloral hydrat., aa 1.
M. Sig. Given at intervals of four hours.

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The "Treatment of Inoperable Septic Peritonitis," by Dr. H. G. Wetherill, of Denver, Colo., is the leading article in Journal of American Medical Association, May 24. The author summarizes his opinions thus: (1) The treatment of septic peritonitis by surgical measures, on the one hand, or by rational medical measures, on the other, must be determined in each case first thru a carefully-made differential diagnosis as to the source of the infection; second, thru an estimate of the apparent virulence and diffusion of the infection, and third, thru consideration of the elapst time since the infecting material was injected into the cavity. (2) Infections from intestines, vermiform appendix and oviduct are apt to be dangerous in the order given, because of the relatively greater mobility of the first and then the second and third, and of the greater relative distribution of their contents, which favors and promotes diffusion of

infection and prevents plastic closure of the leaking viscus. (3) Physiologic rest of the intestines favors limitation of the area of peritoneal involvement and the saving of life, and is best attained by the maintenance of an empty bowel and the avoidance of cathartics; this means lavage, fasting and no salts. If enemata are used for clearing the rectum, as may be required, they must be small in amount and injected with the utmost care from a low bag. (4) Cases of diffuse peritonitis with profound local and general symptoms must be regarded as being inoperable, inasmuch as the interests of the patient and the requirements of good surgery both demand that untimely surgical measures be not employed when better results may be had with simpler and safer ones. (5) Early operation, before diffusion has taken place, is safe in most instances to be advised, if the environment be favorable and an experienced surgeon at hand. Interval operations are certainly advisable after recovery from a diffuse peritonitis from any source.

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In the treatment of pruritus vulvae, it is essential to pay chief attention to removal of causative factors. Especially should an exact urinalysis be made. The diet should be carefully regulated, alcohol and highly seasoned foods being particularly interdicted. Rubbing or scratching of the vulva should be prohibited. The diseased parts may be washt with water and pure soap after each urination. The following will give relief from the itching:

R. Cocainae, ..... 2.
Orthoformi, ..... 1.5
Menthol, ..... 0.5
Acid. carbol., ..... 1.
Vaseline, ..... 75.
M. Sig. Apply to relieve the itching.

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Dr. W. M. McLaren, of San Francisco, in Medical World, gives a wise word of caution as to the use of the curet. He says that much harm comes from its improper use, as well as much good from its proper use. "There are many conditions of the uterus, particularly chronic conditions, that have resisted all medicinal and hygienic measures that have been cured by the curet." On the other hand, much permanent harm has been done in cases most suited to this treatment, or where the curetment has been too harsh. "I have several times seen physicians scrape out a uterus as if it were an iron bucket or a wooden barrel, the sounds of the scraping being heard thruout the room." No wonder the treatment was followed by hemorrhage and inflammation, keeping the patient in bed for weeks thereafter! "They do not realize that this heroic and improper use of the curet removes not only the endometrium, but the deep connective tissue also, and injures the muscular layer."

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A vaginal hysterectomy for cancer, with four months' pregnancy, is reported in American Journal of Obstetrics, April, 1902, by Dr. J. F. Baldwin, of Columbus, O. The patient was aged 28, mother of four children, suffering from too frequent and profuse menstruation. Examination showed a cauliflower growth springing from the posterior lip of the os and filling the entire vaginal vault. In the operation the cauliflower tissue was first broken off with the fingers and then the cervix was amputated. To prevent infection the vagina was resterilized, then the uterus opened and emptied of a four months fetus and placenta, after which the uterus was easily removed thru the vagina. Microscopic examination confirmed the diagnosis of cancer, but it is one of the few cases in which there has been no recurrence within three years after hysterectomy for cancer of the cervix. Baldwin considers it better to remove growth, fetus and uterus all in one operation, as in this case.

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Weber (quoted by American Medicine), says of the climatic treatment of menorrhagia: In some cases of menorrhagia the congestive tendency in the abdominal viscera seems to be affected favorably by residence at high altitudes. In cases occurring in connection with chronic congestion and enlargement of the uterus, often due to subinvolution after childbirth or abortion, an extended course of treatment at muriated, muriated alkaline, or sulphated alkaline spas, followed or interrupted by residence at a climatic health resort of moderate elevation, often gives good results; in these cases, especially, is a prolonged period of rest for the organs required, the congestive tendency being certainly protracted by sexual intercourse. The mere separation from the husband during residence at a health resort may have a good effect. The menorrhagia associated with uterine fibroids is frequently favorably influenced by a course of brine baths, such as those of Kreuznach, Woodhall Spa, and Mt. Clemens, in Michigan. In middle-aged women with a tendency to plethora and obesity, treatment at sulphated alkaline spas, such as Franzensbad, with suitable regulation of the diet and regimen, may be recommended, especially when there is constipation, and should be followed by a stay at some climatic health resort of moderate or high elevation. When there is cardiac dilation, thermal gaseous muriated baths, such as those of Nauheim, with or without resistance exercises, often are useful; high altitudes are counterindicated. Hydrotherapeutic measures and seabathing sometimes are useful in cases requiring tonic treatment; and chalybeate and arsenic spas may be prescribed in certain associations of anemic and debilitated conditions with menorrhagia.

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Occasionally menorrhagia is met in young girls, the most careful examination failing to show any local cause. In such cases the plan advocated by Wallenmann (New England Medical Monthly) should be adopted: The patient must remain in bed during the entire period of the menstruation, and must not leave it until twenty-four to forty-eight hours after the entire disappearance of the flow. The patient must lie on her back without moving the arms and legs. Meals are to be taken in bed. These regulations are difficult to carry out, and yet they are the only ones giving positive results. During the first month's treatment, the duration of the flow is diminisht by a day or two; this improvement becomes more markt every month, and cure is effected as a rule in five or six months. When these girls leave their beds, all physical and mental exertion must be forbidden. Long walks, dancing, bicycling, horseback riding and machine sewing must be given up for a time and returned to gradually after the cure. The general condition with its eliminative and assimilative functions must be improved. Balls, parties or theater are absolutely forbidden. Cold douches and massage stimulate the activity of the skin. All highly seasoned food stuffs, alcohol, strong coffee and tea—in short, everything which tends to irritate the nervous system or leave the system loaded with toxins—are to be avoided.

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Martin, of Chicago, in Cohen's System of Physiologic Therapeutics, presents his views on the use of electricity in the management of uterine neuroses, saying: Neuralgia, or nerve pain, not caused by any recognizable local pathologic change of the nerves to which the pain is referred, is a frequent accompaniment of menstruation, and is located by the patient in the uterus, tubes or ovaries. It may, therefore, be designated neuralgic dysmenorrhea. The patients are, as a rule, of a neurotic predisposition. They are usually anemic, and quite often spare of flesh. Frequently they are overworkt mentally or physically, or both. A debilitated state from any cause predisposes to neuralgia. Prolonged lactation, sexual excesses, uterine hemorrhages, excessive exercise, loss of sleep, and so on, are predisposing factors. Malaria is a not rare cause of menstrual neuralgia. Neuralgic dysmenorrhea is characterized by pain of greater or less severity, located in the ovaries, the uterus, or the tubes, without local structural change of any kind being manifest or discoverable. The pain is purely functional, so far as we are able to discover. It is of almost every description—dull, grinding, sharp, continuous, irregular—and of every grade of severity. It is rather prone to irregularity, and is frequently unilateral. In treating neuralgia, permanent results cannot be expected, of course, without discovering and removing the cause. This is not always an easy matter. Electricity has become, of late, one of our most valuable adjuncts in the treatment of neuralgias of all kinds. It is a question if it does not frequently produce more than temporary effects. In the employment of electricity for neuralgic dysmenorrhea two forms may be used: First, the direct galvanic current, for its local and general stimulating effect on the nervous system, and for the anelectrotonic or sedative effect of the positive pole; and, second, the Faradaic current from the fine wire coil, employed as a sedative, with rapid interruptions. The galvanic current should be used during the intermenstrual periods. Intrauterine, intravaginal, or intrarectal electrodes should be employed as the negative pole (unless the seat of the pain is the uterus, when the intrauterine pole should be positive), and the opposite pole, in the form of a clay pad, should so be placed that the painful portion of the pelvis shall be in the direct line of the circuit. A current of from 50 to 75 or 100 milliamperes should be employed for from five to ten minutes on every second day thruout the intermenstrual period. In numerous cases this simple treatment has been followed by absolute relief in one month. In other cases some amelioration has been apparent in a few weeks, but complete relief followed only after months of application; while, on the contrary, a goodly percentage of cases were not even temporarily

relieved by the procedure. These latter should not be given up without first trying the fine wire Faradism. The fine wire Faradaic current can be used as a supplementary treatment to the galvanic, following the latter at the same sitting, or it may be employed independently or at each alternate application. It is best applied by means of a dipolar electrode, either uterine or vaginal, unless it directly follows the galvanic treatment, when, to spare the patient the additional discomfort of changing the electrodes, the poles may be attacht directly to the instruments already in place. The Faradaic current should be as strong as the patient will bear without undue discomfort. It should never be painful. The sinusoidal current may be employed similarly.

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A unique case is reported in American Medicine by Dr. Frank J. Thornbury, of Dutch Harbor, Alaska. The patient, who resided at Unga, on the Alaskan Peninsula, was a native Aleute woman, of small stature, aged 28. She was the mother of two boys, aged four and six years, respectively. The patient menstruated last in September, 1899, and in the following May she was told by the Mining Company's physician at Unga, Alaska, that she would be confined in about a month. Her abdominal enlargement remained stationary, however, until January, 1900. During the next three months it decreast one-half. In the interval she showed signs of mental derangement, and the latter state persisted until she came under his observation September 18, 1901. For several days she had been having convulsions, and occasionally disturbed her neighbors with wild cries at night. When he saw her on the above date she was unconscious. and during a short observation had two convulsions, each of which was of two minutes' duration. Her pulse was 120, respirations 28, and temperature 39° C. Examination showed a hard symmetric pelvic tumor, reaching half way to the umbilicus. Aural, digital and bimanual examination made it an easy matter to decide that a dead fetus occupied the uterus. Tho the condition of the patient was anything but desirable for a grave operation, she was chloroformed while semiconscious and laparotomy performed. The uterus was found to consist merely of a thin sac, the muscular tissue having atrophied by expansion over a large, full-grown fetus, dead for more than a year! On account of the improbability of the organ regaining its normal state and the great danger of infecting the peritoneal cavity if a Cesarean section was attempted, he decided to remove the entire uterus with its contents. A few adhesions had formed with the omentum, but they were easily separated. The ovaries and tubes being normal, were carefully tied off and left in the pelvis. The operation was without further incident. Chloroform was well tolerated and no hypodermic stimulation became necessary during its administration. The abdomen was closed in the usual manner after careful cleansing and irrigation of the peritoneal cavity with a liter of normal salt solution. The patient had a convulsion an hour after the operation was completed, and another two hours later. She did not regain consciousness, and died in 24 hours. A partial necropsy showed the scene of operation in proper condition. No peritonitis. There was no pelvic deformity. The case was further remarkable by the fact of the transposition of the heart to the right side of the chest, its upper and lower boundaries being the second and fifth ribs, respectively; its inner boundary was represented by the right margin of the sternum. The organ was of peculiar shape, the right side being abnormally large, tho no bruits were heard before death. There were firm adhesions of the right pleura to the anterior mediastinum. Examination of the tumor removed showed a full-grown fetus in which the bones of the skull had become separated and the right hand amputated. The femurs were laid bare on their outer aspect, and the placenta was shrunken into a small, elongated mass. There was no fluid in the uterine cavity, the entire contents of which were much softened but no putrid.

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Dr. W.O. Henry, of Omaha, in a late article on sepsis following abortion or labor, reaches these conclusions: (1) One should remove early with the finger and curet (with flushing) all debris, decidua, bloodclots and sloughing tissue which may be infected, from the uterus and from all raw substances of cervix, vagina and vulva; (2) dry all of these raw surfaces and freely apply to them 95 per cent carbolic acid, washing away the surplus with sterile water; (3) unless hemorrhage requires one should leave no tubes or packing of any kind in either vagina or uterus; (4) have simple carbolized, 2 per cent, vaginal douche used twice a day; (5) open the bowels freely with calomel, ½ grain every hour for 4 hours, to be followed by Rochelle salts until sufficient action has occurred; (6) give quinine, 3 grains, every 4 hours, followed by tincture of the chloride of iron, 15 drops, in water; (7) give good nourishment, with milk, eggs and stimulant every four hours; (8) let this be the routine early treatment; (9) when fixation of the uterus occurs and infiltration takes place in Douglas's cul-de-sac or in the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain thru the vagina; (10) if multiple abscesses occur in the uterine walls, if the walls become badly infected or, if necessary in order to secure perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route.

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Of the electric treatment of strictures of the uterus Dr. Franklin H. Martin, Professor of Gynecology in the Chicago Post-Graduate Medical School, says (Jacoby's "Electrotherapy"): Dysmenorrhea produced by stricture of the uterine canal is of the same character symptomatically as that produced by non-development; in other words, its manifestations are such as to warrant the term obstructive dysmenorrhea. Strictures of the uterine canal are most often found at the external os or at the juncture of the neck with the body. They result from inflammation of the endometrium, from lacerations or other traumatisms, and from improper local treatment or from improper surgery. Endometitis produces stricture of the uterine canal in much the same way that strictures of the urethra are produced. The effects of electric treatment are as follows: (1) The mechanic effect of inserting, two or three times a week for a month, a sound that quite fills the canal, insures drainage for the uterus. (2) The positive intrauterine galvanism (a) acts as a local sedative, (b) contracts local bloodvessels, (c) dries the endometrium by attracting the acids thru electrolysis, (d) acts as a powerful antiseptic, (e) still further dries or depletes the tissues by cataphoresis and (f) causes tanning of the tissues by the salts of copper formed by a combination of the ions of the positive pole with the soft copper of the electrode. (3) Further good results are to be expected from the general systematic tonic effects of the galvanism.

## SURGICAL NOTES.

Dr. F. J. Campbell, of Fargo, N. D., has had two patients from each of whom he removed shot from the vermiform appendix. The first was a man of 20, operated on late in an attack of appendicitis. On opening of the abdomen the appendix was discovered matted in dense adhesions and perforated at its distal extremity. After its removal a No. 4 bird shot, imbedded in fecal matter, was found free in the cavity, where it had slipt thru the perforation and been caught in the adhesion. This shot is of the old lead variety and has evidently been fired from a gun. In the second case, while making an abdominal hysterectomy, the doctor noticed that the appendix was club-shaped and engorged and so removed it. On opening it immediately after completing the operation, he found a No. 6 bird shot about one-fourth inch from the distal end. This patient had never had any symptoms whatever referable to the appendix. Dr. Campbell thinks the shot were swallowed while eating game; and, therefore, urges that more care be taken in masticating this class of food.

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St. Paul Medical Journal contains an account of the removal of a twenty-five cent piece after it had remained in the throat nine months, by Dr. Frederick Leavitt, of St. Paul. The patient, a boy of three years, while playing with some coins, became choked. The mother knew positively what pieces were given him, and insisted that the one misst was a silver quarter of a dollar. A physician was called at once, who succeeded in making matters worse by forcing the object beyond reach. Afterwards, several attempts were made to remove the piece both by pushing it on into the stomach and by extraction. When Dr. Leavitt first saw the case the child was quite emaciated; the lungs were filled with moist rales; the breathing was rapid and labored; cyanosis was markt—indeed, the physical signs were very much the same as those of catarrhal pneumonia. The child could swallow liquid fluids only, and when urged to take a bite of bread he nearly strangled. Examinations showed the coin to be located at about the level of the cricoid cartilage. It was easily drawn by a "penny-catcher" into the pharynx, from which it was extracted by fingers. The tissues of the throat were not injured by this manipulation, nor apparently greatly damaged by the nine-months' presence of the silver piece, which was completely blackened with sulphides.

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The amount of operative work being done by the brothers Mayo, of Rochester, Minn., is not appreciated by the average

surgeon—especially of the East. Dr. W. J. Mayo recently made a report of nearly 400 gall-bladder operations! In a late article on "Surgery of the Stomach," he mentions 15 operations for obstruction of the pylorus. From this experience and careful study of other authorities, he believes that gastric surgery is still in the developmental stage; due chiefly to our lack of definite knowledge upon which to base a surgical diagnosis. He advocates exploration of the interior of the stomach by means of a 3-inch incision in the anterior gastric wall and the insertion of a short rectal speculum. Enlarged lymphatic glands in the omentum are not to be regarded as evidences of malignancy, as they are found in the majority of diseases of the stomach markt by retention and fermentation of the food. The author and his brother, C. H. Mayo, have performed 15 pyloroplasties after Heinecke-Mikulicz; 4 of these were subsequently supplemented by gastro-enterostomy because of a paunch condition of the stomach, which (together with deficient muscular tonicity) prevented its emptying itself. They now anchor the pylorus on a level with the umbilicus. They have performed 80 gastroenterostomies with 8 deaths! The anterior or posterior gastric wall is equally good for the site of anastomosis; the main point to observe is to have this site at the most dependent portion of the stomach—this prevents the so-called "vicious circle." In two cases there was leakage—one on the seventh day after, one on the tenth day, and death resulted. The omentum now is always used to reinforce the seat of anastomosis.

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Dr. Malcolm L. Harris, Professor of Surgery in the Chicago Policlinic, has a valuable article on "Surgery in Ascites due to Hepatic Cirrhosis," in Journal of the American Medical Association May 3, 1902. His studies bear out the correctness of the theory on which operative treatment is founded: The assumption that ascites is due to increast pressure in the portal radicles from obstruction, and that the pressure can be relieved by artificially inducing adhesions between certain viscera and the parietes in order to increase collateral circulation. A study of 22 (including one of his own), shows recovery from the ascites in 13 per cent of the alcoholic cases and 15 per cent of the mixt cases and 5 per cent cured of intestinal hemorrhage, no ascites having been present. He believes that no particular method of operating has any special influence in determining the result. It is important for the surgeon to bear in mind (a) that atrophic cirrhosis may end fatally without ascites; (b) that increast tension may exist without ascites; (c) that edema of the feet and legs may precede ascites in the absence of the kidney disease; and (d) that ascites in cirrhosis is due to chronic generalized peritonitis which not only increases the fluid furnisht, but decreases absorption. The Talma operation is simple and devoid of danger, and should be performed early, in a preascitic stage if possible, as the ascites has apparently been prevented in a few such cases.

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In the treatment of spina bifida, Dr. Leonard Freeman, of Denver, believes that aspiration and compression are very unreliable, and should be limited to small, slow-growing tumors covered with normal skin. He regards injection of irritating fluids as risky, especially if the aperture is large. Hydrocephalus is believed to supervene sometimes. Setons or continuous drainage should never be used. The open method of operating is preferable to any other, and in selecting this age and resisting power should be considered, for the very young will not tolerate prolonged anesthesia or extensive manipulations. Owing to this and the delicacy of the structures, it is often impossible to procure bone or periosteal flaps for plastic operations. Freeman, in a recent case, used fine silver wire in closing the aperture in the vertebral column. After placing the nerve structures and remnants of the sac in the canal a continuous over-and-over suture was inserted thru periosteum and ligaments and occasionally bone itself, the stitches being close enough to form a firm covering for the cord. It is generally unnecessary to suture the spinal membranes. The remnants of the sac fold into a mass, which plugs the opening, and adhesions soon occur. Infection by catgut is thus avoided.

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That arthritis may accompany or follow typhoid fever is known to most surgeons. That it may also result from infection of the joint by the pneumococcus is pointed out by Dr. J. B. Herrick, of Chicago. The condition is found once to 800 cases of pneumonia. (Cave reported in 1901 31 cases, to which Herrick adds 21, including three of his own). The condition is found oftener in men than in women, and usually comes on late in convalescence. Traumatism seems to be an exciting cause. The lesion remains strictly local or involves the periarticular structures, ends of bones, etc. It is generally nonarticular and attacks the large joints, thus resembling gonorrheal arthritis. Prognosis is generally bad, because of the pneumonia, or general bacteriemia. Treatment, while generally surgical, can easily be too radical. There is a certain tendency toward spontaneous recovery, and simple incision and drainage even in suppurating cases may do better than much washing and other manipulation of the joint. When serous effusion only is present, aspiration should be performed. Osler says there are three groups of these cases: (1) Local arthritis alone; (2) arthritis associated with pneumonia; (3) arthritis associated with general pneumococcic septicemia.

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Dr. W. S. Hoy, of Wellston, O., is engaged in a study which he believes will lead to the conclusion that operations on the gall-bladder cure and prevent rheumatism. He has never seen a patient operated on for gall-stones or other condition requiring removal or even drainage of the gall-bladder who has ever had rheumatism afterward, or one who was not permanently relieved if he suffered from this disease prior to operation. He would like to hear from other operators as to their experience.

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The subject of the surgical side of appendicitis is again gone over in a late article by Dr. J. C. Stinson, of San Francisco, who from much study and considerable experience reaches these conclusions: As appendicitis is strictly a surgical disease, the earlier it is operated upon the better for the patient; cases operated upon very early should have no mortality; in all appendicitis operations the appendix should be removed, provided irreparable damage is not done in attempting to find or remove it; where there is a local or general infection the abscess cavity or cavities should be freely opened, all adhesions separated, all pus, shreds, etc., cleaned out, all inflamed or pathologic omentum excised, and all pathologic intestines and infected portions of abdomen freely irrigated with hot water or hot saline solution till the fluid comes away clear; the intestines, etc., then dried with sponges and returned to their normal positions, fecal concretions are more apt to be present as exciting causes of appendicitis than foreign bodies; foreign bodies are sometimes present in the appendix, and are exciting causes of appendicitis; when the appendix contains foreign material it is more likely to be a pointed or heavy body; fecal concretions closely resemble some foreign bodies of light weight—grape seeds, cherry stones, etc.—and that when one is in doubt whether the material is a concretion or foreign body, it should be carefully examined microscopically and chemically to determine the exact character; operations, such as appendicitis or somewhat similar operations, i. e., those involving laparotomy, can be as readily, quickly, safely and cheaply performed at the patient's home as elsewhere.

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In St. Paul Medical Journal Dr. A. R. Colvin, of St. Paul, relates the history of a patient who carried a coin in the esophogus for five months! The patient was a child 2½ years old. It swallowed a one-cent piece Nov. 12, 1901. There was immediate difficult and noisy breathing, which continued for two or three hours; a moderate amount of bleeding was noticed. On the following day she refused to swallow anything. Solid food which had been previously ingested was, however, vomited. On the third day she was feverish and vomited very frequently; after this time she swallowed and retained liquid nourishment, but refused solid food then and since. Dr. Colvin saw her first April 19, 1902. At that time her only complaint was of some soreness in her throat. Her present condition is that of a well-nourisht, healthy child. With the fluoroscope the one-cent piece could be seen about one inch below the upper end of the sternum, moving upwards and downwards and laterally with forced respiratory movements. Under ether anesthesia a "coin catcher" was passt quite easily beyond the object. While the doctor watcht the introduction and withdrawal of the instrument with the fluoroscope, the coin was comparatively easily removed. Following its removal there was some slight bleeding, and on the second day a maximum temperature of 102 degrees F.; on the third day the temperature was normal, and swallowing was apparently not accompanied by pain.

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At the late meeting of the Texas State Medical Society, Dr. H. W. Crouse, of Victoria, one of the progressive young surgeons of the great Southwest, read a paper on the surgical aspects of wounds of poisonous snakes and spiders. In it he presented the results of a long series of experiments, his main object being to furnish the general practitioner with ready means of distinguishing the bites of different kinds of snakes and spiders and of thus being in a position to apply the requisite remedies. The general treatment found most efficacous consisted of permanganate of potassium injected locally and also administered by the mouth; of hypodermic use of strychnine and small doses of

alcohol and rest. The popular idea that alcohol is an antidote is a mistake. Tho useful in conjunction with the other remedies mentioned, it seems when given alone to rather add to the virulence of the poison.

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In a discussion of the surgical treatment of typhoid perforation (Proceedings Chicago Surgical Society, May 5, 1902), Dr. Wyllys Andrews narrated a successful case and favored early operation. Dr. Alexander Hugh Ferguson mentioned a case on which he operated for a supposed appendicitis. The patient, while convalescing from typhoid fever, was seized with severe pain in the region of the appendix. A tumor developt, and proved to be an abscess which had communicated with the bowel. Dr. L. L. McArthur reported three unfavorable results in fairly early operations. Notwithstanding this, he believes that the only proper course is operation as early as possible.

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A Murphy button in the stomach for seven years is the latest report from Dr. A. H. Cordier, Professor of Abdominal Surgery in University Medical College, Kansas City (Kansas City Medical Index-Lancet, May, 1902). The patient, on whom he made a gastrojejunostomy, after six years died of acute pneumonia and a postmortem was obtained. The Murphy button used in the gastrojejunostomy was never passt during life, but after death it was found still in the stomach; and yet the anatomic condition of the stomach and bowel, notwithstanding that the pylorus was practically closed, was perfectly satisfactory. The presence of the button in the stomach had never given rise to a single symptom during the nearly seven years that it had remained there. Cordier thinks this fact is in favor of its employment, considering also that it greatly shortens the time of operation.

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Beatson (Philadelphia Medical Journal) reports a case of angio-sarcoma of the clavicle successfully treated by excision of the clavicle. A girl, aged 16 years, had noticed a swelling in the neck 7 months before coming under observation, at which time it commenced 1½ inches from the outer end of the clavicle, crosst the median line and reacht close to the sternal border of the right clavicle. Above it reacht the thyroid cartilage and below descended over the second rib. After a flap had been dissected up, the clavicle was sawn thru in its outer quarter and the remaining inner portion of the bone removed. A portion of the sternal end of the second rib was also excised. At a second operation some enlarged glands were removed from the edge of the trapezius muscle. The tip of the shoulder has fallen downwards and is three-quarters of an inch nearer the middle line. The function of the arm is but little impaired.

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In a masterlike essay on elbow fractures in children, Cotton (Annals of Surgery, March, 1902) says that the injuries most often met are fractures of the external condyle, supracondylar fracture, epitrochlear separation and separation of the entire epiphysis—the frequency of these injuries being in the order mentioned. Special forms of deformity are associated with each of these injuries. In external condylar fracture there is tendency to spur formation with or without displacement of the condyle itself. Supracondylar fracture frequently shows gunstock deformity as well as backward displacement of the lower fragment. Epitrochlear separation shows displacement of the fragment downward and forward. The loss of motion from external condylar fracture is not great and is confined to extension. Supracondylar fractures and separation of the epiphysis show loss of flexion usually from backward displacement. Epitrochlear separation may show loss of extension apparently caused by muscular shortening. In the treatment of these conditions he recommends for the external condylar fracture reduction by flexion and pronation with lateral pressure. The arm is put up in the acute angle position. He has made a series of five experiments on newly-born children, and confirms Smith's experiments, which show the value of the position of acute flexion. Extension is likely to produce displacement, and there is no good reason for treatment of such fractures in the extended position. Right-angled flexion has no special advantage. It is certain that acute flexion holds the ulna in place, and it is probable that it also fixes the external condyle by tension on the ligaments and facia. With the ulna and radius fixt, displacement from acute flexion is not to be feared. In the supracondylar fractures reduction is accomplisht by traction in the flext position and is maintained by a right-angled splint with adhesive strapping to prevent the forearm from slipping backward, and a pad in the bend of the elbow is used to give counterpressure. In epitrochlear separations the acutely flext position best relaxes the muscles. Here the prospect of bony union is poor and early massage is advised for such cases.

William J. Morton reports the progress made in the treatment of eight cases of cancer by X-radiance. By this means of treatment we accomplish: 1. Relief from excruciating pain and constant suffering, often immediately; 2, reduction of the size of the new growth; 3, establishment of the process of repair; 4, removal of the odor if present; 5, cessation of the discharge; 6, softening and disappearance of lymphatic nodes; 7, disappearance even of lymphatic enlargement not directly submitted to treatment and often quite distant; 8, removal of the cachectic color and appearance of the skin; 9, improvement in the general health; 10, cure up to date of a certain number of malignant growths. The uncertainties and dangers of the method are found in the absence of a definite measure of the dosage; the possibilities of a burn or of gangrene. There is present also the difficulty of ascertaining when the danger point is reacht.

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Unna recommends the following paste in treatment of lupus:

R. Acidi salicylici,
Sol. antomonii chloridi, aa 4.
Creosoti,
Ext. cannabis indicae, aa 2.
Lanolini, 16.

M. Sig. Apply locally to the afflicted part. The solution of antimony is an unofficial preparation and is a powerful caustic and a destroyer of bacilli. The creosote and cannabis indica will relieve the pain. The salicylic acid aids penetration.

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Dr. G. Fuetterer, Professor of Internal Medicine in the Chicago Policlinic (Jour. Am. Med. Assn.), gives reports of a number of cases, also a tabulated list of fifty-two cases taken from literature, in which carcinoma of the stomach developt from chronic round ulcer of the stomach. This development occurs from those parts of the edges of the ulcer which are most exposed to mechanical irritation by the contents of the stomach. In the pyloric region it is the lower pyloric margin of the ulcer which is most exposed to mechanical irritation and from which carcinoma develops; but other parts of the edges may be the ones involved when dilations and adhesions have changed the position of the organ. We must, therefore, in all cases in which ulcer of the stomach or its scar narrows the pylorus, recommend early a gastro-enterostomy to prevent the development of carcinoma.

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Is blue glass to become again "the rage?" It is said that Minin, of St. Petersburg, has announced that blue rays have the power to allay the pain of open wounds. He gives two cases in which large cuts were rendered absolutely painless by ten minutes' exposure to blue light.

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For the relief of gonorrheal epididymitis, Dr. Earl Harlan, of Cincinnati, says: Use the following liniment from the beginning. Its action is exceedingly rapid and effective, and I have never seen it fail:

R. Ammonii chloridi ..... ..... .....
Potassii iodidi, ..... aa, 8.
Alcoholis ..... ..... .....
Aquae dest ..... ..... ..... aa, 64.

M. Sig.: Apply with a small camel's hair brush four times daily.

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Major L. A. La Garde, of the United States Army (for many years a prominent surgeon of the West), in a recent article reviews the statistics relative to gunshot wounds of the kneejoint during the time when the large caliber projectiles were used, and recent statistics relative to the same condition but caused by the modern small projectiles. He concludes as follows: (American Medicine, May 31) (1) We find that the mortality of gunshot injury of the kneejoint in the Civil War was 53.7 per cent, and as amputation was universally done all those who recovered escaped with the loss of a limb, unfit for duty; (2) that 33 cases of gunshot wounds of the knee produced by the larger caliber lead bullet in campaign, reported by Reyher and v. Bergmann, treated antiseptically, gave a mortality of 11.1 per cent; (3) that 62 cases produced by a variety of missiles reported by the Surgeon-General since 1898, similarly treated, gave a mortality of 8 per cent, and that 45.6 per cent of those who recovered were restored to duty; (4) that of 19 cases in the Santiago campaign by the reduced caliber bullet the mortality was nil, and that 73.6 per cent of the wounded recovered fit for duty. It is thus seen that the humane features of the reduced-caliber bullet have operated not only in diminishing the mortality in gunshot injuries of the knee from about 8 per cent or 11 per cent to nil, but that it has increast restorations to duty 28 per cent, as shown by comparing the last two tables.

Ingalls reports (Philadelphia Medical Journal) a case of splanchnoptosis which he treated by suturing the round and falciform ligaments of the liver to the anterior abdominal wall and to the costal margin; the patient is vastly improved. He emphasizes the fact that surgery offers material aid to individuals suffering from this condition, and that the work should be complete in every detail, i. e., suture of the liver and kidney, shortening of the gastrohepatic omentum, fixation of the transverse colon, and general reconstruction of the abdominal wall.

Dr. August Schachner,of Louisville, Ky., in Annals of Surgery, has collected reports of 155 instances of foreign bodies left in the abdomen after section. Among the conclusions which he draws from a study of these cases and from his own experience are the following: Foreign substances will continue to be unintentionally left in the abdominal cavity as long as surgery is practist. He believes that the recorded cases do not represent the true frequency of the accident. Such foreign bodies may escape thru the point of least resistance, whether by the intestines or imperfectly united wounds. In other cases they remain without any special symptoms for years. In certain cases they cause symptoms which vary, depending upon the size, sterility and character of the body. These accidents are caused usually by some emergency during the operation. They may be the result of a defective system of antisepsis or a dangerous degree of complexity. The plan of attaching tapes to pads and instruments to prevent their being left in the abdominal cavity has proved fallible. The smallest number of pads, sponges and instruments possible should be used, and account should be taken of them at the end of the operation. The surgeon can only hope to reduce these accidents by the observance of simplicity, system and watchfulness.

Another case of that rare disease, sarcoma of the tonsil, has lately been recorded by Dr. Arthur G. Root. The patient was only 23 years of age; male. The mass involved the whole of the left tonsil, presst the anterior pillar forward and upward, and extended downward below the margin of the epiglottis. Externally, the chain of lymphatic glands was to some extent involved. He had lost some flesh, which was probably due to the fact that swallowing had been difficult and he was worried over his condition. Microscopic examination of a small portion of the growth revealed the fact that it was a short spindle-celled sarcoma. Lateral pharyngotomy was done, and the mass with the infected glands and tissues removed. He left the hospital 36 days later. For a time he made remarkable progress, but six months later the disease returned, involving the lower jaw and surrounding tissues, and death followed in about four months.

The advantage of mentholization of the mucosa of the air passages preliminary to etherization are set forth by Dr. W. A. Briggs, of Sacramento, Calif., in Maritime Medical News, May, 1902. He says: This plan has given me such satisfaction as to impel me to submit the method to the profession at large. The method is as follows: Sprinkle a dram of oil of peppermint or of saturated alcoholic solution of menthol in the cone; let the patient inhale of this freely for three minutes, then saturate the cone with ether and bring it down slowly over the face; after a few full inhalations crowd the cone down well and push the etherization as rapidly as is consistent with safety; continue the use of the mentholized cone thru the whole period of anesthesia, replenishing the ether as usual. After the operation let the patient inhale oil of peppermint or menthol from a handkerchief freely and often until the tendency to nausea subsides. The advantages of this over the usual method are the following: (1) Entire freedom from cough and sense of impending suffocation and comparative freedom from nausea, vomiting and retching. (2) Ease and rapidity with which anesthesia may be induced and the ease and smoothness with which it may be maintained. (3) The entire absence or markt abbreviation of the period of excitement. (4) Economy both of ether and of time. (5) Profounder first anesthesia, under which minor operations may be done with more certainty. (6) Probably less postoperative nausea and vomiting.

For relief of the tenesmus of acute prostatitis, Medical Fortnightly advises:

R. Ichthyol, 2.
Ext. hyoscam, 0.5.
Ol. theobrom, q. s.
Ft. suppos. No. vj. Sig. Insert one every six hours.

Fracture of both clavicles occurred recently in the practice of Dr. T. B. Marquis, of Ennis, Mont. He reports it to Medical World. The patient, a young man, had both clavicles fractured; the right one near the inner end, the outer fragment being driven in behind the sternum; the left one was fractured at the outer third. Surgical works give the various methods of treating a fractured clavicle, its management usually involving the use of a sling for the elbow and forearm. But the traditional practise seemed inadequate to a case wherein both clavicles were fractured. The doctor, therefore, put the patient on a stool and directed one assistant to lift upward under the elbows, while another assistant stood behind and pulled backward on the point of the shoulders, thus reducing both fractures. Then he made a figure-of-eight shoulder brace across the back with plaster-of-paris bandages, and followed with a complete plaster splint of the thorax, shoulders and neck, the assistants meanwhile holding the shoulders in position as described. The doctor extended the splint about half way down the upper arm, allowing patient the use of forearm and hand at table. The result in this case was good.

The cause of tumor-formation was discusst by Dr. Geo. Halley, Professor of Surgery in the University Medical College of Kansas City, at the last meeting of the Western Surgical and Gynecological Association. He remarkt that scientific investigations have been enlarging the scope of knowledge along the lines of etiology, but no theory has been broad enough to account for all the phenomena characteristic of benign or malignant tumors. Inflammatory conditions that almost invariably produced some kind of tumefaction were for a long time regarded as the principal factor in their production; many things, however, in the inflammatory conditions in no way comport with the ordinary processes found in tumor growths, and the products of most of the tumor growths are utterly unlike those of the inflammatory process. But as inflammation has been believed to be principally due to irritation, it was held to be the prime factor in the production of morbid growths. One constantly recurring element in all benign tumors is the connective tissue. Sometimes it predominates and sometimes it is held in abeyance. Its presence is never wanting. Of all the tissues in the body, it most readily responds in physiologic activity to irritating processes. In inflammatory changes it is found to be the reconstructing agent. It is not wonderful, therefore, that we have in this tissue the essential part, if not the entire mass, composed of this tissue. Is the connective tissue germ cell altered in quality? Has it been inoculated by a plastic material altered in equality by an irritant, or has there been a coalescence of protoplasmic germs from other tissues? We have not yet determined this, but in the answer to these questions, Dr. Halley believes, will be found the true etiology of the benign tumor.

French surgeons seem to be coming to the same opinion long held by many Americans concerning anesthetics. Philadelphia Medical Journal quotes Huchard as believing that chloroform can be used as an anesthetic for patients with valvular heart disease, myocarditis, aortic or coronary affections, etc., without danger. It is much less dangerous for them than for patients with pulmonary affections associated with great dyspnea. The only contraindications are a state of asystole, toxi-alimentary dyspnea, acute pulmonary edema or markt general weakness. But these are only temporary; for, when improvement occurs, an operation may be performed under chloroform. Chloroform has been employed for the relief of stenocardia. As an anesthetic, chloroform must be given in continued minute doses without intermission, drop by drop, until the palpebral reflex has totally disappeared, not using more than 3 to 5 drams for an operation of less than hour. Death from chloroform anesthesia only occurs when anesthetic is unskilfully administered. Nor are these accidents more frequent in patients with heart disease than in patients with other affections. Huchard concludes that chloroform, well prepared and prudently administered, never causes death.

At the last meeting of the Western Surgical and Gynecological Association, Dr. M. L. Harris, of Chicago, called attention to two varieties of injuries to the inner structures of the knee-joint, which, he believed, were more common than the attention heretofore given them would seem to indicate. These injuries might be produced in one of two ways: First, by the direct application of force, as might occur in a fall upon the knee, or by the forcible impingement of a more or less pointed object against this portion of the joint; second, by pinching or crushing the apex of the mass in the angle between the femur and tibia, as might occur when these bones were slightly separated during hyperflexion or sudden wrenching. The cases nar-

rated by the author illustrated the serious and persistent disablement that might occasionally result from comparatively slight pathologic changes affecting the inner structures of the kneejoint, and showed the necessity of operative treatment in those cases following an injury in which the characteristic symptoms persisted after the usual treatment of the joint by rest and immobilization.

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New York Medical Journal says that Dupuy has modified Butte's method of the treatment of lupus with potassium permanganate, which consists of a compress saturated with a lukewarm two-per-cent solution of potassium permanganate applied for twelve or fifteen minutes daily for about a fortnight, after which the treatment is applied every two days. Dupuy's modification is as follows: A one-in-fifty solution was applied according to the Butte method, while in the case of non-ulcerated lupus a powder was used as giving the best results. The following is the method: The whole surface having been washt (with either an ichthyol soap or an emulsion of corrosive sublimate, tincture of benzoin, and soap in distilled water), and carefully dried with tampons of absorbent wool, powdered permanganate is spread over the whole of the lupus patch with a spatula. Should the area affected be extensive only a portion is so treated at a time. A piece of dry absorbent wool is then applied, and the whole is left on for a quarter of an hour. At the end of this time the wool is removed and the surface washt with boric lotion and a simple wet dressing applied. Generally a single application of potassium permanganate suffices.

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As a local application for the temporary relief of hemorrhoids, the following prescription from New England Medical Monthly is worthy of trial:

R. Hydrastin,
Pulv. aluminis, aa 1.
Cocain. hydrochlorat., 0.5.
Butyr. cocoae, q. s.
M. et ft. rect. suppos. No. xij. Sig. Insert one every night.

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New York Medical Journal remarks that there is some variation in the formula of "normal salt solution" given by the different writers. Dr. Charles A. L. Reed, in his new Text-book of Gyneology, remarks that Lock has suggested the following formula, and reported favorably upon it:

Calcium chloride, gr. iij¾.
Potassium chloride, gr. jss.
Sodium chloride, dr. ijss.
Water, one pint.
M. The solution may be injected subcutaneously, into the intestine, or into a vein.

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Dr. James B. Bullitt, of the University of Virginia, Charlottesville, describes (Journal of the American Medical Association) a dissecting abscess of the abdominal wall producing deformity resembling that of Pott's disease. He says that abscesses of the abdominal wall without any connection with the abdominal cavity occur most frequently as a result of typhoid fever, and readily heal after incision and drainage. The larger dissecting abscesses of the abdominal wall communicate at their inception with some portion of the intestinal tract, occur most frequently as a sequela of typhoid fever and appendicitis, and result from an adhesion between the parietal peritoneum and a viscus, with perforation of the latter. After rupture such abscesses follow the course of fecal fistula, healing sometimes spontaneously or as a result of incision with drainage only after the communication with the intestine has become obliterated. The obliteration sometimes occurs spontaneously,sometimes must be brought about by operative procedure. A dissecting abscess may produce symptoms and deformity simulating Pott's disease; on the other hand, Pott's disease with abscess appearing after an attack of typhoid fever may be confounded with abscess resulting from the typhoidal process.

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A case somewhat similar to that of President McKinley—but with recovery without operation—is recorded in Philadelphia Medical Journal, of Oct. 12, 1901, by G. W. Penn, of Humboldt, Tenn. The bullet entered the stomach somewhat lower than was the case with Mr. McKinley, and was received when the stomach was full. The patient vomited freely as soon as shot, the vomitus consisting of the meal just eaten, together with quantities of clotted blood. He was fed exclusively on the mucilage of the cactus or prickly pear for fourteen days, which was allowed from the first, gradually returning to a full diet. There was never any decided rise of temperature and no evidence of peritonitis. The case is of interest chiefly as showing the unaided curative action of Nature occasionally in such cases.

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Rotch says that bedsores will seldom be met if the nurse is competent. When they are likely to occur it is advisable to rub the parts upon which the patient rests with alcohol, and daily sponging of the entire body with warm water and then with alcohol will add greatly to comfort. Should a suspicious spot of redness present itself, it is necessary to remove the pressure therefrom by an air-cushion, and prevent the folds of linen pressing upon the patient. Dry dressings are preferable to moist ones for bed-sores, and oxide of zinc in powder or ointment is one of the most valuable remedies; acetate of aluminum has also a very beneficial effect. At times, considerable loss of substance is found, giving rise to a very foul odor; in these cases a charcoal poultice acts remarkably well.

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A remarkable case of congenital absence of the abdominal muscles is recorded in Bulletin of John Hopkins Hospital by Osler, of Baltimore. This is the third case on record, Parker and Gutherie each having described a case. Osler's report is as follows: The child was well until the second summer, when gastric attacks of nausea and vomiting began. From the history of the case, in some of the attacks the chief trouble was with the urine. The spells lasted four and five weeks at a time. The present crisis showed pains in the abdomen and burning upon urination. The very weak, anemic, poorly nourisht child complained of pain in the hypogastric and lower umbilical regions; passt urine fifteen or twenty times daily, and had a temperature ranging between 99 and 102 degrees. There was remarkable fullness in the hypogastric and lower umbilical regions, with an ovoid mass corresponding to a dilated bladder. In the recumbent position the belly flattened out in front and extended in the flanks. Coils of intestines could be seen in peristalsis. There was extreme relaxation of the abdominal walls and the organs underneath could be easily palpated. It was possible to feel the whole extent of the liver. The bladder reacht almost to the navel. There was also cryptorchidismus.

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The editor of North Carolina Medical Journal has lately toucht upon a very important surgical question: the after-effects of operations. He says: Every now and again the question is askt as to whether or not the ease and safety with which surgical work of all kinds is done in these days does not tend to a too frequent resort to the knife; especially in cases when better results, so far as the comfort of the patient is concerned, might follow a more conservative course. Altho the propounder of such questions is usually "sat upon" as behind the times, or himself accused of lacking a proper appreciation of the accomplishments of modern surgery, the fact remains that in many departments of operative work, these conservative ideas have borne fruit. Perhaps the best example of such a reaction is in the prevailing sentiment of the profession regarding the removal of the comparatively normal generative organs of woman. The rebound from the radicalism of a few years ago is markt. Again, it may as well be admitted that the ease and safety of modern operations, as compared with the time when a simple amputation of an extremity often resulted fatally, does offer a temptation to the skillful surgeon, difficult to resist. But while the tendency is to consider successful surgery as having been accomplisht with the recovery of the patient from the immediate operation, it should not be overlookt that the object to be gained is not a demonstration of him much scientific mutilation the human body can successfully withstand, but its restoration as far as may be, to a normal condition. Not infrequently one sees chronic cases of hypochondrical tendencies, bearing the scars of one or more operations, which, while ostensibly exploratory, were really done for mental effect. While it is true that occasionally such procedures result favorably as to relief of the symptoms, in quite as many others the mental aspect of the case is quite as bad, or even worse, another neurosis being superadded. The generally brilliant results of surgery have not yet sufficed to drive away that instinctive dread of the knife, which will usually be found to reside in the mind of the layman. The quack who advertises to cure cancer without an operation finds abundance of material; likewise, he, who with much clamor announces his ability to painlessly remove hemorrhoids, reaps a rich harvest. The blind attempt of the average man to be healed of his disease by purely medical means, if it could be realized, is the highest development of medical art. To amputate a cancerous limb is after all a confession of our inability to cure the malady. We do the next best thing, and get rid, at any cost save that of life itself, of the diseased part.